

## RULEMAKING ISSUE NOTATION VOTE

December 14, 2009

SECY-09-0181

FOR: The Commissioners

FROM: R. W. Borchardt  
Executive Director for Operations

SUBJECT: PROPOSED RULE: PHYSICAL PROTECTION OF BYPRODUCT MATERIAL (RIN 3150-A112)

PURPOSE:

To request Commission approval to publish a proposed rule in the *Federal Register* that would add a new part 37 to Title 10 of the Code of Federal Regulations (CFR) and make conforming changes to parts 30, 32, 33, 34, 35, 36, 39, 51, 71, and 73. The proposed rule would amend the regulations to put in place security requirements for the use of category 1 and category 2 quantities of radioactive material and for shipments of small quantities of irradiated reactor fuel.

SUMMARY:

The U.S. Nuclear Regulatory Commission (NRC) staff recommends that the Commission approve publication of this proposed rule. The proposed rule includes security requirements that would be applied to byproduct material, specifically to category 1 and category 2 quantities of radioactive material. This rulemaking would place the security requirements for use of category 1 and category 2 quantities of radioactive material into a new part 37 of the CFR. It would also address transportation security of shipments of 100 grams or less of irradiated reactor fuel. In developing the proposed rule the staff considered the various security orders, lessons-learned during implementation, the recommendations of the Independent External Review Panel and the Materials Program Working Group, and stakeholder comments on the preliminary rule language.

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The proposed rule addresses access authorization, physical protection during use, and physical protection during transportation.

#### BACKGROUND:

Commission regulations provide requirements for the safe use, transit, and control of licensed material. A licensee's loss of control of risk-significant radioactive material, whether it is inadvertent or through a deliberate act, could result in significant adverse impacts that could reasonably constitute a threat to the public health and safety or the common defense and security of the United States. After the attacks of September 11, 2001, the Commission determined that certain licensed material should be subject to enhanced security provisions and safeguarded during transport, and that individuals with unescorted access to risk-significant radioactive material should be subject to background checks. The Commission issued these enhanced security provisions through a series of security orders.

The NRC used a graded approach, based on the relative risk and quantity of material possessed by the licensee, to issue the security orders. The first series of orders were issued to certain panoramic and underwater irradiator licensees that possessed more than 370 Terabecquerels (10,000 Curies) of radioactive material (EA-02-249; June 6, 2003). The next series of orders were issued to certain manufacturing and distribution (M&D) licensees (EA-03-225; January 12, 2004). These orders require the implementation of additional security measures and the protection of the licensee's physical protection information as Safeguards Information-Modified Handling (SGI-M). In addition, the NRC issued orders related to transportation security. The first transportation security orders were issued to certain licensees that might be expected to transport radioactive materials in quantities of concern (category 1 quantities) (EA-05-006; July 19, 2005). Subsequently, the NRC issued orders (EA-05-090; November 14, 2005) to other licensees authorized to possess certain risk-significant quantities of radioactive material (category 1 and 2 quantities). These orders contained provisions for security during use and for transportation security. The Agreement States issued legally binding requirements to their licensees.

In 2005, Congress passed, and the President signed, the Energy Policy Act of 2005 (EPAAct). The EPAAct amended Section 149 of the Atomic Energy Act (AEA) to authorize the Commission to require the fingerprinting of any individual who is permitted unescorted access to radioactive material or other property subject to regulation by the Commission that the Commission determines to be of such significance to the public health and safety or the common defense and security as to warrant fingerprinting and background checks. Under this new authority, the Commission determined that individuals with access to category 1 and category 2 quantities of radioactive material warrant fingerprinting and background checks. On October 17, 2006, the NRC issued orders to panoramic and underwater irradiator licensees (EA -06-248), M&D licensees (EA-06-250), and licensees making shipments of category 1 quantities of radioactive material (EA-06-249) to require fingerprinting and Federal Bureau of Investigation criminal history records checks for individuals permitted unescorted access to risk-significant quantities of radioactive material at their facilities. On December 5, 2007, the NRC issued orders to all other NRC licensees that possessed category 1 or category 2 quantities of radioactive material (EA-07-305). The Agreement States issued legally binding requirements to their licensees.

The requirements put in place by the orders provide the Commission with reasonable assurance that public health and safety and the common defense and security continue to be adequately protected given the current threat environment.

Although a security order is legally binding on the licensee receiving the order, a rule makes requirements generally applicable to all licensees. In addition, notice and comment rulemaking allows for public participation and is an open process. This rulemaking would place the security requirements for use of category 1 and category 2 quantities of radioactive material into the regulations. In developing the proposed rule the staff considered the various security orders, lessons-learned during implementation, the recommendations of the Independent External Review Panel and the Materials Program Working Group, and stakeholder comments on the preliminary rule language. In addition a petition for rulemaking filed by the State of Washington was considered during the development of the proposed rule.

The staff posted preliminary proposed rule language for subparts B, C, and D of part 37 on <http://www.regulations.gov> for public comment. The staff considered the comments received on the preliminary language in finalizing the proposed rule language. The Statements of Consideration addresses those areas where a substantive change to the rule text was made based on public comment.

#### DISCUSSION:

The staff is proposing to place the security requirements for use of category 1 and category 2 quantities of radioactive material into a new part 37. The new part would consist of seven subparts. Subpart A would contain the general provisions, such as the purpose and scope, definitions, and information collection requirements. Subpart B would contain the requirements for the background investigations and access authorization program. Subpart C would contain the security requirements for use of the radioactive material. Subpart D would contain the transportation security requirements. Subpart E would be reserved for future provisions. Subpart F would contain the records and reporting requirements, and subpart G would contain the enforcement provisions. Conforming changes would be made in other parts of the regulations, as appropriate. The draft *Federal Register* notice containing the proposed rule is contained in Enclosure 1. The key aspects of subparts B, C, and D are discussed in the following paragraphs and in more detail in the *Federal Register* notice.

#### Subpart B

Subpart B contains the proposed provisions for the background investigation and access authorization program. The requirements would be applied to any licensee that possesses radioactive material at or above the category 2 threshold. Licensees would be required to submit information on compliance with the access authorization requirements within 30 days of the effective date of the rule. The key components of an access authorization program include the use of a reviewing official, informed consent, personal history disclosure, background investigations, use of procedures, and the right to correct and complete information before an adverse determination. Reinvestigation would be required every 10 years.

The proposed rule includes a list of categories of individuals that would be relieved from fingerprinting, identification, criminal history records check, and other elements of background investigations, and a list of those that would be subject to the access authorization program.

Individuals subject to the access authorization program would be anyone with unescorted access to category 1 or category 2 quantities of radioactive material. Unescorted access is defined as solitary access to category 1 or category 2 quantities of radioactive material granted to an approved individual. Unescorted access includes solitary access to sufficient quantities of radioactive material such that an individual could successfully accumulate lesser quantities of material into a category 1 or category 2 quantity. Also included in the access authorization program would be individuals associated with the shipment of category 1 quantities of radioactive material and the reviewing official. In order to ensure that the reviewing official undergoes an access authorization review, the proposed rule requires that the reviewing official be permitted access to either SGI or category 1 or category 2 quantities of radioactive material. Licensees would be required to review the program every 12 months.

### Subpart C

Subpart C contains the proposed provisions for physical protection during use of category 1 and category 2 quantities of radioactive material. In general, subpart C would require licensees that are authorized to possess category 1 or category 2 quantities of radioactive material to develop a security program, while only those that aggregate the radioactive material at or above the category 2 threshold would be required to implement and maintain the security program. Within 30 days of the effective date of the rule, licensees would be required to submit information concerning the licensee's compliance with subpart C. Licensees that do not currently (at the time of rule implementation) possess an aggregated quantity of radioactive material at the category 1 or category 2 level would be required to notify the NRC 90 days before aggregating the radioactive material in such a manner that the quantity equals or exceeds the category 2 threshold.

The objective of the security program would be to enable the licensee to monitor, and without delay detect, assess, and respond to any actual or attempted unauthorized access to category 1 or category 2 quantities of radioactive materials. A licensee's security program would include a written security plan, implementing procedures, training, use of security zones, coordination with the local law enforcement agency (LLEA), notification of LLEA for temporary job sites, testing and maintenance of security-related equipment, security measures, and a program review. The subpart would also establish special requirements for enhanced security measures for mobile sources, and for times when tamper-indicating and alarm systems must be disabled to permit the maintenance of equipment or replacement of radioactive materials.

During NRC management review and concurrence of the proposed rule text, there was considerable discussion related to the proposed requirements for coordination with LLEAs. Specifically, it was pointed out that the existing Increased Controls Orders for materials licensees require that a licensee "shall have a pre-arranged plan with LLEA for assistance in response to an actual or attempted theft, sabotage, or diversion of such radioactive material or of the devices which is consistent in scope and timing with a realistic potential vulnerability of the sources containing such radioactive material." In the proposed rule, the NRC-Agreement State working group agreed upon text that requires the licensee to include with other information provided to the LLEA "[a] request to establish a written agreement with the LLEA that describes the LLEA's commitments to provide a response in accordance with this section [§ 37.45.]"

Based on experience gained through implementation of the Increased Controls Orders, it was recognized that there may be circumstances when a licensee is unable to comply with a requirement to obtain a written agreement from an LLEA due to the LLEA's unwillingness to participate in establishing a written agreement. The proposed rule text therefore requires the licensee to notify NRC if the LLEA has not responded to the licensee's request for coordination within 60 days, or if the LLEA notifies the licensee that the LLEA does not plan to participate in coordination activities. This proposed requirement is consistent with the Commission's requirements for reactor licensee emergency planning. In 10 CFR 50.47, "Emergency Plans," the Commission recognized that on rare occasions, a licensee may be unable to comply with a requirement based on non-participation of state and or local officials, even after the licensee has demonstrated a sustained, good faith effort to elicit their participation.

#### Subpart D

Subpart D contains the proposed security provisions for the transport of category 1 and category 2 quantities of radioactive material and for shipments of 100 grams or less of irradiated reactor fuel. The requirements would be applied in a graded approach with more measures placed on transport of category 1 quantities of radioactive material and irradiated reactor fuel. The proposed measures address preplanning and coordination activities, advance notice for category 1 shipments, reporting in the event of a lost or missing shipment or suspicious activities related to the theft or diversion of the shipment.

For road shipments of category 1 quantities of radioactive material, licensees would be required to use a carrier that has established movement control centers that maintain position information, use a telemetric position monitoring system, and establish redundant communications that allow the transport to contact the movement control center. For rail shipments of category 1 quantities of radioactive material, licensees would be required to ensure that the shipment is monitored by a telemetric position monitoring system, ensure that reports are made to the communication center, and have an NRC-approved monitoring plan that covers the time when the shipment is in the classification yard. The requirements for small quantities of irradiated reactor fuel would be the same as for category 1 quantities of radioactive material. For shipments of category 2 quantities of radioactive material, licensees would be required to either use a carrier that has an established package tracking system, maintains constant control and/or surveillance during transit, and has the capability for immediate communication to summon appropriate response or assistance, or if they choose to transport the material maintain constant control and/or surveillance during transit, and have the capability for immediate communication to summon appropriate response or assistance.

#### Specific Areas for Public Comment

The *Federal Register* notice requests public comment on seven issues that the NRC staff is considering for inclusion in the final rule. These issues are addressed in more detail in the Statements of Consideration (SOC). The first issue is whether or not the reviewing official should be fingerprinted with a criminal records check conducted as part of the process of determining his or her trustworthiness and reliability. If the individual approving access to the radioactive material does not undergo the complete background investigation, it could be perceived that there is a gap in security. The only way that the NRC can require the reviewing official to be fingerprinted is to require the individual to be permitted access to safeguards information or category 1 or category 2 quantities of radioactive material. In many organizations

the reviewing official may be a human resources person that ordinarily would not need access to radioactive material or safeguards information. As written, the NRC would need to review the criminal history records of the reviewing official for NRC licensees and Agreement State officials would review the criminal history records of their licensees. Some Agreement States have indicated that they may not have authority to review criminal history records. This issue is addressed in question B5 in the SOC.

The second is the appropriate elements of a background investigation. Stakeholders have questioned the inclusion of some of the background investigation elements. Questions were raised on potential inconsistent implementation due to the subjectivity of some of the elements and the value of the information received. One State indicated that it may not have legal authority to require individuals to submit information regarding credit history and character and reputation determinations. This issue is addressed in question B8 in the SOC.

The third issue is the protection of information section. Questions were raised regarding which elements of the background investigation should be used to determine if an individual should have access to the protected information and what information should be subject to the requirements of this section. This issue is addressed in question C6 of the SOC.

The fourth issue is the proposed requirement for notification of the LLEA for work at a temporary jobsite. Stakeholders have questioned the value of this requirement. Some fear that the LLEA may be overburdened by receipt of the notifications and unsure as to what to do with the information. Some have questioned how a licensee will be able to identify the LLEA in an unfamiliar area and that this will impose an undue burden on the licensee and LLEA without a corresponding benefit. This issue is addressed in question C15 in the SOC.

The fifth issue is whether an exemption or alternative to the requirement for disabling the vehicle for mobile devices should be included in the regulations for circumstances in which there may be an overriding health and safety concern. Commenters on the preliminary rule language raised the concern in connection with oil and gas field service vehicles that may be needed to quickly evacuate a work area. This issue is addressed in question C17 in the SOC.

The sixth issue is whether licensees transferring category 1 or category 2 quantities of radioactive material should be required to verify that the license and address of the receiving licensee are valid. Because category 2 quantities of radioactive material are often sent to temporary jobsites, there are potential issues associated with address verification. If a verification of license is required should it be at every transfer or could it be conducted annually? This issue is addressed in question D4 in the SOC.

The last issue is the need for an NRC-approved monitoring plan for temporary storage of category 1 quantities of radioactive material in a railroad classification yard. There are potential personal safety issues for an individual to remain with the material while it is stored in the classification yard. It is not clear what measures the railroad will allow. This issue is addressed in question D21 in the SOC.

#### Regulatory Basis for Issuance of the Proposed Regulations

The NRC issued some of the previously discussed orders under its authority to protect the common defense and security. These included the orders to panoramic and underwater

irradiator licensees, M&D licensees, and licensees that might be expected to transport category 1 quantities of radioactive materials. The orders were issued to both NRC and Agreement State licensees. The remaining orders were issued to NRC licensees under the NRC's authority to protect the public health and safety. To effect nationwide implementation of this latter subset of orders, each Agreement State issued legally binding requirements to licensees under their regulatory jurisdiction.

With respect to whether the following regulations are being issued under "public health and safety" or "common defense and security," it should be recognized that almost all regulations relating to the security of radioactive materials serve both purposes to some degree. For example, securing radioactive materials with multiple barriers protects the public health and safety by preventing the unknowing theft of radioactive materials—such as someone stealing a vehicle with material stored in the vehicle but whose target is the vehicle—which could result in the unintentional exposure of members of the public to the material. The barriers also protect the common defense and security by preventing the theft of the radioactive material by potential terrorists or others targeting the specific material intending to use it to detrimentally impact the defense and security of the nation. However, the designation of the authority being used for these regulations does have significance in determining whether Agreement States or the NRC will be responsible for overseeing the implementation of these requirements for Agreement State licensees.

Although the NRC relinquishes its regulatory authority to Agreement States for certain materials, under Section 274(m) of the AEA no such agreement will affect the authority of the Commission to take regulatory action to protect the common defense and security. Thus, as evidenced by orders issued to Agreement State licensees after the events of September 11, 2001, the NRC always has the ability to take necessary steps to address particular common defense and security needs. If these regulations were to be issued under the NRC's common defense and security authority, only the NRC would have the authority to impose these requirements on Agreement State licensees and the NRC would be responsible for inspection and enforcement of these requirements for Agreement State licensees.

There are no specific criteria that provide guidance for determining whether an issue is related to the protection of the common defense and security or protection of the public health and safety. When regulations, such as these, complement both the NRC's public health and safety and common defense and security missions, the operative question is whether NRC oversight is necessary to fulfill the common defense and security aspects of the regulations. The NRC considers proper control of radioactive material to be vital to public health and safety. A licensee's loss of control of high-risk radioactive material has a potential to result in significant adverse health effects through unintentional or unauthorized use and subsequent exposure. The staff believes that the Agreement States can consistently and adequately implement the physical protection requirements on a nationwide basis, and as such, there will be no need for independent NRC action to protect the common defense and security. The NRC has continual oversight of individual Agreement State programs through its Integrated Materials Performance Evaluation Program (IMPEP). As always, NRC retains the authority under Section 274(m) of the AEA to take any necessary actions to protect the common defense and security should individual licensees or State programs develop issues requiring immediate action. The Commission also has the authority under Section 274(j) to terminate or suspend all or part of its agreement with a State and reassert the Commission's licensing and regulatory authority when the Commission determines that doing so is necessary to protect the public health and safety.

The failure of an individual Agreement State to implement compatible and adequate legally binding requirements to protect radioactive materials within its jurisdiction could disrupt the entire national scheme to protect radioactive materials such that it might raise serious public health and safety, or common defense and security concerns that the NRC would have to address. To date, however, Agreement States have effectively demonstrated their ability to protect the public health and safety.

As long as all Agreement States continue to implement compatible and adequate security requirements, there appears to be no benefit to the public health and safety, or common defense and security goals that would justify removing oversight of these requirements from an established regulatory program overseeing Agreement State licensees. Implementing these regulations under the NRC's public health and safety authority would avoid potential complications of licensees being subject to dual regulation for a single activity. Thus, the staff is proposing to issue these regulations under its public health and safety authority, and these regulations will be applicable to Agreement State licensees through the Agreement State Program.

### Implementation

The staff is recommending that the final rule be effective 180 days after publication in the *Federal Register*. This would provide time for licensees to put in place the necessary programs, develop procedures, and conduct training on the new requirements. While most of the proposed provisions are similar to those contained in the Orders, there are differences. The Agreement States would be required to issue compatible regulations within 3 years. The provisions put in place for the inspection of licensees in Agreement States that received the Orders issued under common defense and security would remain in place until the Agreement State implements the regulations. For those States that entered into 274.i Agreements, the State would continue inspections under its Agreement. For those States that did not enter into 274.i Agreements, the NRC would continue to conduct the inspections until the State has put in place the new requirements. The NRC would terminate the Orders once the requirements have become effective.

No change to the enforcement policy should be necessary for implementation of part 37. However, inspection procedures would need to be updated. The training program for Agreement State staff may need to be updated to address those security reviews that would now be conducted under Agreement State authority. The staff will also develop guidance to address part 37 implementation that will be available for public comment during the comment period on the proposed rule.

The proposed Part 37 rule will require licensees to develop a security plan for the protection of Category 1 and 2 quantities of radioactive material and to protect the licensee-generated security information by limiting access to individuals with a need-to-know and that have been determined to be trustworthy and reliable. Currently, 10 CFR 73 requires the security plans developed by these types of licensees to be designated as Safeguards Information – Modified Handling (SGI-M). Because of the requirements in 10 CFR 73, the information protection requirements for these licensees will be different than for the rest of licensees that will be implementing the information protection requirements of the proposed Part 37 (i.e., licensees currently implementing the Increased Controls (IC) requirements). The security requirements in the proposed Part 37 are similar to the requirements imposed on IC licensees, which do not



contain safeguards information, therefore, the staff considers that a revision to Part 73 in a separate rulemaking is appropriate to remove the SGI-M handling requirements for the security plan developed by large panoramic and underwater irradiators and M&D licensees. The staff will make this proposal to the Commission in separate correspondence. Until such time that Part 73 can be amended to reflect this change, the NRC would remain responsible for conducting inspections against the SGI-M handling requirements for both NRC and Agreement State licensees. The staff plans to maintain the SGI-M handling requirements for the transportation of Category 1 quantities of radioactive material.

### Strategic Goals and Objectives

The proposed rule is consistent with NRC strategic objectives and performance goals. The proposed rule would continue to ensure the protection of public health and safety and the common defense and security. The proposed rule would improve the security of category 1 and category 2 quantities of radioactive material and continue to ensure the secure use and management of radioactive materials. The rulemaking will be conducted in an open process that allows the public to comment on the enhanced security measures that up to this point have not been subject to public comment because the requirements were mandated through the use of orders. The proposed rule will be published in the *Federal Register* for a 120-day public comment period. The staff is proposing 120 days instead of the normal 75-day public comment period because of the length and complexity of the proposed rule. The additional time will also allow time for public workshops on the guidance document(s).

### AGREEMENT STATE ISSUES:

The Agreement States were represented on the working groups and the steering committee associated with this rulemaking. A copy of the draft proposed rule *Federal Register* notice was provided to the Agreement States so they could have an early opportunity for review. The Organization of Agreement States (OAS) and the following Agreement States provided comments on the draft *Federal Register* notice: Arkansas, Florida, Illinois, Iowa, Kansas, Louisiana, Maine, Minnesota, New Hampshire, Ohio, Oklahoma, Rhode Island, Texas, Utah, Washington, and Wisconsin. Some of the Agreement State comments provided the State's views on the issues for which we are specifically inviting public comment. These comments will be considered during development of the final rule, along with any other comments received on these issues. Some of the comments related to implementation and were referred to the guidance working group for consideration. Several comments resulted in revisions to the discussion section of the SOC and proposed rule language to provide additional emphasis or clarity. Some States indicated that the requirements in the proposed rule were too specific, while other States recommend that more specific provisions be added to some areas. Several of the States objected to any requirements beyond those required by the Increased Control Orders. The major topics of concern raised by the Agreement States related to fingerprinting of the reviewing official, elements of the background investigation, reinvestigations, LLEA coordination at temporary jobsites, security plans, and security zones. These issues are briefly discussed in the following paragraphs.

One area of major disagreement is the proposed requirement to fingerprint the reviewing official. Three States indicated support for the requirement, and five States expressed opposition to the requirement. Twelve States and OAS expressed views on who should approve the reviewing official. Views ranged from NRC conducting the review, Agreement States conducting the

review, to allowing the licensee to make the decision. At least one State indicated that it may not have the authority to conduct the review, and one State indicated that it may not have the authority to protect the background investigation information from release to the public. Several States expressed concern that the reviewing official must be allowed access to radioactive material as the reviewing official is often part of human resources and would not normally have access to radioactive materials. Fingerprinting of reviewing officials was also the topic of working group and steering committee discussion. The steering committee recommended that the provision be included in the rule and that NRC invite specific comment on the issue. This is the approach that has been taken.

Another area of Agreement State comment is the elements to be included in the background investigation. Ten States and OAS provided comments on at least one aspect of the background investigation elements. The States objected to the inclusion of a credit history, employment history, and the character and reputation determination. One State didn't think that the State had the statutory authority to require licensees to require individuals to submit information regarding credit history and character and reputation determinations. Reasons given for opposition were the concern that the credit history checks and other reference checks were an invasion of privacy; the licensee should be able to determine what it will use as qualifying or disqualifying criteria; use of a credit history and the character and reputation determination are very subjective; employment history checks and the character and reputation determination may be considered discriminatory; the character and reputation determination might be illegal and is based on emotion instead of facts; and the subjectivity of several of the elements would result in inconsistency in implementation. One State suggested the inclusion of a check for legal status of the individual. In response to the State's comments, the NRC staff added text to specifically invite comment on this topic

Four States and OAS objected to the requirement to conduct reinvestigations, except for individuals who transferred from another company and had not already been subject to a background investigation by the current licensee. The States believed that the use of the licensee's own performance evaluation process for the previous 10 years and its evaluations of the individual's trustworthiness and reliability would be more accurate than a formal reinvestigation. One State supported the reinvestigation and suggested that the character and reputation element should be included in the reinvestigation. In addition, five States and OAS specifically objected to the reinvestigation provision for the reviewing official. The NRC staff believes that periodic reinvestigation is an important aspect of a security program because an individual's situation may change over time in a manner that could adversely affect his or her trustworthiness and reliability. No changes have been made on the reinvestigation provisions in response to State comments.

An area of major disagreement is the proposed requirement to require LLEA notifications for temporary jobsites. Ten States and OAS expressed concern over this requirement. Most States indicated that the provision is unrealistic, impractical, and not implementable. The States believe that it is not practical to expect a licensee to determine the LLEA with jurisdiction at a temporary jobsite as the LLEA could be city, county, or state, or a combination of jurisdictions. One of the States noted that the States sometimes have difficulty keeping track as various federal, state, and local LLEA cover different areas. Licensees typically move during the course of the day and enter multiple jurisdictions and therefore, may have trouble identifying the appropriate LLEA. States felt that as these jobs often involve repair of critical oil and gas infrastructure, the work could be delayed while the licensee attempts to determine which LLEA

has jurisdiction. States also indicated that the notification places undue time burdens on all LLEAs to confirm and educate them and that repeat notices to LLEAs may desensitize the LLEAs to the need for an immediate response to a true emergency, and would create more confusion and disorganization for LLEAs by flooding them with vast amounts of trivial paperwork that does not require their immediate attention or response. One State offered an alternative to require the work crew to have daily contact with the home office regarding status and location. Failure to report as directed would prompt an investigation by the home office, which would lead to LLEA notification as appropriate. In response to the State's comments, the NRC staff has left the requirement in the proposed rule but has added text to specifically invite comment on this topic.

Five States and OAS expressed concern over the proposed requirements for a written security plan and the use of security zones. These States indicated that licensees already have programs in place under the orders, that the program has already been inspected and verified under the licensees' increased control plans, and that there is no need to rename these plans. As for the security zones, the States felt that the use of security zones would introduce a new and confusing term and that there is no need for a new special term for the areas currently under the orders. The States also indicated that referring to an area as a security zone may draw unnecessary attention to the area. The NRC staff notes that the orders will be withdrawn when the final rule is effective, and the security plan and its implementation is what NRC and States will be inspecting against. The staff also believes that a plan is necessary to document how a particular licensee is implementing the requirements. In addition, the area in which a licensee implements the security measures needs to be called something for identification purposes and spelling out the requirements. The States did not provide convincing arguments for eliminating the requirements for either security plans or security zones.

NRC staff has analyzed the proposed rule in accordance with the procedures established within Part III of the Handbook to Management Directive 5.9, "Categorization Process for NRC Program Elements." The proposed rule has different compatibility designations depending on the specific section of the rule. Enclosure 2 is a table that contains the draft compatibility determination for the proposed rule; compatibility is also addressed in Section V of the SOC. Two Agreement States provided comments suggesting a change in the compatibility designations. One State suggested changing the compatibility of § 37.79(a)(2) from compatibility "B" to compatibility "C" and another State suggested changing the compatibility of § 37.45(a) and (b) from compatibility "B" to compatibility "C". The NRC staff believes that both of these requirements have transboundary implications and thus has not made the requested change. The Standing Committee on Compatibility reviewed the proposed rule and agreed that these proposed amendments to the NRC regulations are a matter of compatibility between the NRC and the Agreement States. The Committee and the staff have reached agreement on the compatibility designations.

#### COMMITMENTS:

1. The staff plans to publish guidance document(s) for public comment during the public comment period on the proposed rule.
2. The staff plans to host at least one workshop on the guidance documents during the comment period.

3. The staff will provide an options paper on potential changes to the SGI-M handling provisions in Part 73.

RECOMMENDATIONS:

That the Commission:

1. Approve for publication in the *Federal Register* the proposed amendments to Parts 30, 32, 33, 34, 35, 36, 37, 39, 51, 71, and 73 (Enclosure 1).
2. Note:
  - a. That the proposed amendments will be published in the *Federal Register*, allowing 120 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 a draft Regulatory Analysis has been prepared for this rulemaking (Enclosure 3).
  - d. That an Environmental Assessment has been prepared for this rulemaking (Enclosure 4).
  - e. That appropriate Congressional committees will be informed of this action.
  - f. That a press release will be issued by the Office of Public Affairs when the proposed rulemaking is filed with the Office of the Federal Register.
  - g. An Office of Management and Budget (OMB) review is required and a clearance package will be forwarded to OMB no later than the date the proposed rule is submitted to the Office of the Federal Register for publication.

RESOURCES:

To complete the rulemaking, the following resources are budgeted.

Office	Fiscal Year (FY) 2010	FY2011
FSME	1.3	0.1
NSIR	0.2	0.0
ADM	0.2	0.02
NRO	0.1	0.1
NMSS	0.2	0.2
NRR	0.1	0.1
OGC	0.3	0
Total	2.7	0.72

The estimated resources are included in the fiscal year (FY) 2010 President's Budget and FY 2011 budget request.

COORDINATION:

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 rule suggests changes in information collection requirements that must be submitted to OMB no later than the date the proposed rule is forwarded to the *Federal Register* for publication.

Martin Virgilio for */RA/*

R. W. Borchardt  
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Enclosures:

1. *Federal Register* Notice
2. Draft Compatibility Table
3. Draft Regulatory Analysis
4. Environmental Assessment

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 30, 32, 33, 34, 35, 36, 37, 39, 51, 71, and 73

RIN 3150-A112  
[NRC-2008-0120]

Physical Protection of Byproduct Material

**AGENCY:** U. S. Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The U. S. Nuclear Regulatory Commission (NRC) is proposing to amend its regulations to establish security requirements for the use and transport of category 1 and category 2 quantities of radioactive material, which the NRC considers to be risk-significant and therefore to warrant additional protection. Category 1 and category 2 thresholds are based on those established in the International Atomic Energy Agency (IAEA) Code of Conduct on the Safety and Security of Radioactive Sources. The objective of this proposed rule is to provide reasonable assurance of preventing the theft or diversion of category 1 and category 2 quantities of radioactive material. The proposed regulations would also include security requirements for the transportation of irradiated reactor fuel that weighs 100 grams or less in net weight of irradiated fuel. The proposed rule would affect any licensee that is authorized to possess category 1 or category 2 quantities of radioactive material, any licensee that transports these materials using ground transportation, and any licensee that transports small quantities of irradiated reactor fuel.

**DATES:** Submit comments on the rule by **(insert date 120 days from date of publication)**.

Submit comments specific to the information collection aspects of this rule by **(insert 30 days from date of publication)**. Comments received after the above dates will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before these dates.

**ADDRESSES:** You may submit comments by any one of the following methods. Please include Docket ID NRC-2008-0120 in the subject line of your comments. Comments submitted in writing or in electronic form will be posted on the NRC website and on the Federal rulemaking website Regulations.gov. Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed.

The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in their comments that they do not want publicly disclosed.

**Federal Rulemaking Website:** Go to <http://www.regulations.gov> and search for documents filed under Docket ID NRC-2008-0120. Address questions about NRC dockets to Carol Gallagher 301-492-3668; e-mail [Carol.Gallagher@nrc.gov](mailto:Carol.Gallagher@nrc.gov).

**Mail comments to:** Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.

**E-mail comments to:** [Rulemaking.Comments@nrc.gov](mailto:Rulemaking.Comments@nrc.gov). If you do not receive a reply e-mail confirming that we have received your comments, contact us directly at 301-415-1677.

**Hand-deliver comments to:** 11555 Rockville Pike, Rockville, Maryland 20852, between 7:30 am and 4:15 pm Federal workdays. (Telephone 301-415-1677)

**Fax comments to:** Secretary, U.S. Nuclear Regulatory Commission at 301-415-1101.

You may submit comments on the information collections by the methods indicated in the Paperwork Reduction Act Statement.

You can access publicly available documents related to this proposed rule using the following methods:

**NRC's Public Document Room (PDR):** The public may examine and have copied for a fee publicly available documents at the NRC's PDR, Public File Area O-1 F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

**NRC's Agencywide Documents Access and Management System (ADAMS):** Publicly available documents created or received at the NRC are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this page, the public can gain entry into ADAMS, which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's PDR reference staff at 1-800-397-4209, 301-415-4737 or by e-mail to [pdresource@nrc.gov](mailto:pdresource@nrc.gov).

**Federal Rulemaking Website:** Public comments and supporting materials related to this proposed rule can be found at <http://www.regulations.gov> by searching on Docket ID NRC-2008-0120.

**FOR FURTHER INFORMATION CONTACT:** Merri Horn, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: (301) 415-8126, e-mail: [Merri.Horn@nrc.gov](mailto:Merri.Horn@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

I. Background

II. Discussion



- A. General Applicability
- B. Background Investigation and Access Authorization Program
- C. Physical Protection During Use
- D. Transportation Security
- III. Discussion of Proposed Amendments by Section
- IV. Criminal Penalties
- V. Agreement State Compatibility
- VI. Plain Language
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- VIII. Finding of No Significant Environmental Impact: Availability
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- X. Regulatory Analysis
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## I. Background

The NRC has long participated in efforts to address radioactive source protection and security. However, the terrorist attacks of September 11, 2001, heightened concerns about the use of risk-significant radioactive materials in a malevolent act. Such an attack is of particular concern because of the widespread use of radioactive materials in the United States by industrial, medical, and academic institutions. The theft or diversion of risk-significant quantities of radioactive materials could lead to their use in a radiological dispersal device (RDD) or a radiological exposure device (RED).

The NRC's current regulations provide requirements for the safe use, transit, and

control of licensed material. Any loss of control of risk-significant radioactive material, whether inadvertent or through a deliberate act, could result in significant adverse impacts that could reasonably constitute a threat to the public health and safety or the common defense and security of the United States. In the changed threat environment after the attacks of September 11, 2001, the Commission determined that certain licensed material should be subject to enhanced security requirements and safeguarded during transport, and that individuals with unescorted access to risk-significant quantities of radioactive material should be subject to background investigations.

As part of the development of the enhanced security measures, the NRC performed vulnerability assessments to identify gaps or vulnerabilities in security and the effectiveness and costs of certain physical protection enhancements at various licensed facilities. The results of the vulnerability assessments were used in the development of security enhancement orders that were issued to licensees using a graded approach based on the relative risk and quantity of material possessed by the licensee. The NRC issued the first series of orders to certain panoramic and underwater irradiator licensees that possessed more than 370 TBq (10,000 Ci) of radioactive material (EA-02-249; June 6, 2003) (68 FR 35458; June 13, 2003). The next series of orders were issued to certain manufacturing and distribution (M&D) licensees (EA-03-225; January 12, 2004) (69 FR 5375; February 4, 2004). These orders require the implementation of additional security measures and the protection of the licensee's physical protection information as Safeguards Information – Modified Handling (SGI-M). The original orders are not publicly available because they contain detailed security requirements that are designated as SGI-M. However, redacted versions of these orders have been made available to the public (73 FR 33859; June 13, 2008, and 73 FR 49714; August 22, 2008). These orders were issued to both NRC and Agreement State licensees under the NRC's authority to protect

the common defense and security. Subsequently, the NRC issued Increased Control Orders (EA-05-090; November 14, 2005) (70 FR 72128; December 1, 2005) to other licensees authorized to possess certain risk-significant quantities of radioactive material (category 1 and category 2 quantities). The Increased Control Orders do not contain safeguards information (SGI) or SGI-M and are available on the NRC's public website at <http://www.nrc.gov/security/byproduct/orders.html>. These orders were issued under the NRC's authority to protect public health and safety, and require licensees to implement enhanced security measures known as Increased Controls. To effect nationwide implementation of the Increased Control Orders, each Agreement State issued legally binding requirements to put enhanced security measures, identical to the Increased Controls, in place for licensees under that State's regulatory jurisdiction.

These security orders specifically address the security of byproduct material possessed in quantities greater than, or equal to, category 1 and category 2 quantities. The orders provide for enhanced security measures for such things as license verification before transfer, intrusion detection and response, access control, and coordination with local law enforcement authorities (LLEAs). The orders also contain requirements for the licensee to determine the trustworthiness and reliability of individuals permitted unescorted access to risk-significant radioactive materials. The determination involves a background investigation of the individual. The background investigations were originally limited to local criminal history records checks with law enforcement agencies, verification of employment history, education, personal references, and confirmation of employment eligibility (legal immigration status).

In 2005, Congress passed, and the President signed, the Energy Policy Act of 2005 (EPAAct). The EPAAct amended Section 149 of the Atomic Energy Act (AEA) to authorize the Commission to require to be fingerprinted any individual who is permitted unescorted access to radioactive material or other property subject to regulation by the Commission that the

Commission determines to be of such significance to the public health and safety or the common defense and security as to warrant fingerprinting and a Federal Bureau of Investigation (FBI) criminal history records check. With this new authority, the Commission determined that individuals who have access to category 1 and category 2 quantities of radioactive material warrant fingerprinting and FBI criminal history records checks. On October 17, 2006, the NRC issued orders to panoramic and underwater irradiator licensees (EA-06-248) (71 FR 63043; October 27, 2006), manufacturer and distributor licensees (EA-06-250) (71 FR 63046; October 27, 2006), and licensees making shipments of category 1 quantities of radioactive material (EA-06-249) (71 FR 62302; October 24, 2006) to require fingerprinting and FBI criminal history records checks for unescorted access to risk-significant quantities of radioactive material at their facilities. In issuing these orders, NRC noted that a malevolent act by an individual with unescorted access to these materials could result in significant adverse impacts to the public health and safety or the common defense and security and, thus, necessitated expedited implementation of additional fingerprinting requirements. The orders were issued to both NRC and Agreement State licensees under the NRC's authority to protect the common defense and security. On December 5, 2007, the NRC issued orders to all other NRC licensees that possessed category 1 or category 2 quantities of radioactive material (EA-07-305) (72 FR 70901; December 13, 2007) to require fingerprinting and FBI criminal history records checks for unescorted access to category 1 or category 2 quantities of radioactive material. These orders were issued under the NRC's authority to protect the public health and safety and are available on the NRC public website at <http://www.nrc.gov/security/byproduct/orders.html>. To effect nationwide implementation, each Agreement State issued legally binding requirements to licensees under their regulatory jurisdiction.

During the same time period, efforts were underway to enhance transportation security of category 1 and category 2 quantities of radioactive materials. The NRC issued two sets of orders to licensees transporting radioactive material in quantities of concern. The first set of transportation security orders was issued to certain licensees that might be expected to transport radioactive materials in quantities of concern (category 1 quantities) (EA-05-006; July 19, 2005) (70 FR 44407; August 2, 2005). The orders require the implementation of additional security measures and the protection of the licensee's physical protection information as SGI-M. The original orders are not publicly available because they contain detailed security requirements that are designated as SGI-M. However, a redacted version of the order is publicly available (73 FR 51016; August 29, 2008). These orders were issued to both NRC and Agreement State licensees under the NRC's authority to protect the common defense and security. Subsequently, the NRC issued orders (EA-05-090; November 14, 2005) (70 FR 72128; December 1, 2005) to other licensees authorized to possess certain risk-significant quantities of radioactive material (category 2 quantities). The Increased Control Orders mentioned earlier also contain requirements for transporting category 2 quantities of radioactive material.

These security orders specifically address the transportation security of byproduct material transported in quantities greater than, or equal to, category 2. The additional security measures contained in the orders provide for enhanced security measures during transportation that are beyond the current regulations, including enhanced security in preplanning and coordinating shipments, advance notification of shipments to the NRC and States through which the shipment will pass, control and monitoring of shipments that are underway, trustworthiness and reliability of personnel, information security considerations, and control of mobile or portable devices.

The requirements put in place by the orders supplement the existing regulatory requirements. These additional requirements are primarily intended to provide reasonable assurance of preventing the theft or diversion of this risk-significant material. These requirements provide the Commission with reasonable assurance that public health and safety and the common defense and security continue to be adequately protected.

Although an order, like a rule, is legally binding on the licensee receiving the order, a rule is generally applicable to all licensees and is implemented through an open and public process. The notice-and-comment rulemaking process allows members of the public to provide comments on the proposed rule. It is Commission policy to implement generally applicable requirements through rulemaking.

If promulgated, this rulemaking would adopt security requirements for category 1 and category 2 quantities of radioactive material into the regulations. New requirements for background investigations and an access authorization program are proposed to ensure that individuals who have access to these materials have gone through background investigations and are determined to be trustworthy and reliable. New requirements are also proposed to establish physical protection systems to detect, assess, and respond to unauthorized access to category 1 and category 2 quantities of radioactive material. For transport of the radioactive materials, new requirements for recipient license verification; preplanning and coordination of shipments; advance notification of shipments; notification of shipment delays, schedule changes, and suspected loss of a shipment; and control and monitoring of shipments are proposed. The proposed amendments would also include security requirements for shipments of irradiated reactor fuel that weighs 100 grams (0.22 pounds (lb)) or less in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, which has a total external radiation dose rate in excess of 1 sievert (Sv) (100 rem) per hour at a distance of 91 meters (m) (3 feet (ft)) from any accessible surface without intervening shielding.

In developing the proposed rule the NRC considered, among other things, the various security orders, lessons-learned during implementation of the orders, the recommendations of the Independent External Review Panel and the Materials Program Working Group, and stakeholder comments received on the orders and the preliminary rule language that was posted on Regulations.gov. The Commission chartered the Independent External Review Panel to: (1) identify vulnerabilities in the NRC's materials licensing program with respect to import, export, specific, and general licenses; (2) validate the ongoing byproduct material security efforts; and (3) evaluate the apparent "good faith presumption" that pervades the NRC licensing process. The Panel's March 2008 report is available in ADAMS under accession number ML080700957. The Materials Program Working Group conducted a comprehensive evaluation of the materials program to identify short- and long-term strategies to mitigate security vulnerabilities. The Working Group report contains sensitive information and is not publicly available. However, the Group's comments on the Panel's report are publicly available in ADAMS under accession number ML080660424.

In developing the basis for the transportation security aspects of the rule, NRC held three public meetings to seek public comment on the development of the technical basis. The NRC published information on the requirements being considered along with some background information and a notice of the three meetings (73 FR 826; January 4, 2008). In response the NRC received more than 100 comments from stakeholders that were used to finalize the technical basis for the transportation portion of this rulemaking. The comments addressed a number of issues and concerns. However, most focused on clarifying requirements, adding efficiencies, and improving the processes that licensees follow to comply with the additional security measures currently enforced under security orders.

During the development of the proposed rule, the NRC posted preliminary rule text for public comment on <http://www.regulations.gov> under Docket ID NRC-2008-0120. The posting

of the preliminary rule text was noticed in the *Federal Register* and included the portions of the rule that address background investigation and access control aspects (subpart B) (74 FR 17794; April 17, 2009), enhanced security during use (subpart C) (74 FR 20235; May 1, 2009), and transportation security aspects (subpart D) (73 FR 69590; November 19, 2008). The NRC allowed a 45-day comment period for each subpart. In the documents announcing the availability of the preliminary regulatory text, the NRC made it clear that it would not respond to any of the comments received during this pre-rulemaking stage. The NRC did consider the public input on the preliminary rule text in finalizing the proposed rule, and areas where they made a substantive change based on the comments are discussed in this Statement of Considerations. The NRC also made some editorial changes based on the comments; these changes are not discussed further.

#### PRM-71-13

On July 16, 2008 (73 FR 40767), the NRC published the resolution and closure of a petition for rulemaking (PRM) filed by Christine O. Gregoire, Governor of the State of Washington (PRM-71-13). The NRC indicated that the issues raised by the petitioner would be considered in an ongoing rulemaking on the security requirements for the transportation of radioactive material in quantities of concern.

The petitioner requested that the NRC adopt the use of global positioning system (GPS) tracking as a national requirement for vehicles transporting highly radioactive mobile or portable radioactive devices. The petitioner stated that the Commission could instead grant States the flexibility to impose more stringent requirements than those required under the current increased controls. The petitioner believes that GPS technology is an effective and relatively inexpensive tool that will help when a vehicle with radioactive material is missing, but also acknowledged that requiring a GPS on these vehicles does not ensure that the radiological



source will be found. However, the petitioner believes that these suggestions would give law enforcement a significant advantage. The NRC considered the issues identified by the petitioner and the petitioner's suggested approach to address those issues in the development of this proposed rule.

## II. Discussion

The NRC believes that a new part of the Code of Federal Regulations (CFR) should be established for the security requirements for use of category 1 and category 2 quantities of radioactive material. The concept for using a separate part for safety and physical protection requirements has already been established for special nuclear material (10 CFR part 73). The establishment of a new part for security-related requirements for byproduct material would be more effective and efficient compared to interspersing the requirements with safety requirements or placing them with the part 73 security requirements for special nuclear material. A new part specifically directed to byproduct material licensees should make applicable requirements easier for both licensees and other stakeholders to locate and understand.

This discussion section has been divided into four subsections to better present information on the proposed rule. Each section presents information on a different aspect of the proposed rule. Section A provides information that is generally applicable to all aspects of this proposed rulemaking. Section B provides information on background investigations and the access authorization program. Section C provides information on the physical protection of the materials during use. Lastly, Section D provides information on transportation security aspects.

### A. General Applicability

### *1. What Action is the NRC Taking?*

The NRC is proposing to amend its regulations to impose security requirements for the use of category 1 and category 2 quantities of radioactive material. The proposed requirements would establish the objectives and minimum requirements that licensees must meet to protect against theft or diversion. These requirements are intended to increase the protection of the public against the unauthorized use of category 1 or category 2 quantities of radioactive material by reducing the risk of the theft or diversion of the material.

### *2. Why Do the Requirements Need to be Revised?*

Prior to September 11, 2001, NRC requirements focused on safety and preventing inadvertent or accidental exposure of both workers and the public to these materials. These requirements also indirectly provided security for the material. However, the events of September 11 made the NRC take a broader look at its requirements and reevaluate what a terrorist might do to attain these materials. From this effort, the NRC identified several areas where additional requirements should be implemented to improve security. The security requirements need to be placed in the regulations so that they are generally applicable to all licensees and to provide an opportunity for all stakeholders to comment on the proposed requirements.

### *3. Why Doesn't the NRC Just Keep the Orders in Effect?*

The orders issued by the NRC could stay in place indefinitely. However, the regulations would not reflect current Commission policy or requirements. Imposing long-term requirements through orders has not traditionally been the agency's preferred method of regulation. Orders, unlike rules, do not apply prospectively to applicants for new licenses. The NRC would have to periodically issue new orders to cover new and amended licenses, and perhaps reissue orders periodically to existing licensees if requirements or administrative practices change. In order to

make the requirements generally applicable to all present and future licensees, the security-related requirements need to be placed in the regulations.

Assured that adequate security is in place for these materials (because of existing regulations and orders), the NRC is now planning to formally revise its security requirements and gather public and stakeholder input. The orders would remain in place for NRC licensees until the final rule becomes effective. Once the final rule is effective, the NRC will rescind the orders that were issued to its licensees. For Agreement State licensees that received an NRC order, the order would remain in place until the Agreement State issues compatible requirements. Once the State has issued its requirements, the NRC would rescind the order. Each Agreement State would follow its own process for replacing the increased control legally binding requirements with the requirements contained in the final rule.

#### *4. Who Would This Action Affect?*

These requirements would apply to NRC or Agreement State licensees that are authorized to possess category 1 or category 2 quantities of radioactive material. This includes a wide range of licensees, including pool-type irradiator licensees; manufacturer and distributor licensees; medical facilities with gamma knife devices; self-shielded irradiator licensees (including blood irradiators); teletherapy unit licensees; radiographers; well loggers; broad scope users; radioisotope thermoelectric generator licensees; and licensees that ship or prepare for shipment category 1 or category 2 quantities of radioactive material. Nearly 1,400 licensees are implementing the various orders and are the entities that would be impacted by this proposed rule. In addition, some fuel cycle and reactor licensees that possess sources at these levels would be impacted. Licensees whose activities are covered under the physical protection requirements of 10 CFR part 73 would be exempt from the requirements of 10 CFR part 37. For example, a reactor licensed under part 50 that also possesses a radiography

source would not need to implement the part 37 provisions if the source is protected under the reactor security program required by part 73.

5. *What are Category 1 and Category 2 Quantities of Radioactive Material?*

Category 1 quantities of radioactive material have been called radioactive material in quantities of concern (RAMQC). Category 1 and category 2 quantities of radioactive material have been called risk-significant radioactive material and refer specifically to 16 radioactive materials (14 single radionuclides and 2 combinations). These materials are: americium-241; americium-241/beryllium; californium-252; curium-244; cobalt-60; cesium-137; gadolinium-153; iridium-192; plutonium-238; plutonium-239/beryllium; promethium-147; radium-226; selenium-75; strontium-90 (yttrium-90); thulium-170; and ytterbium-169. Irradiated fuel and mixed oxide fuel are not included even though they may contain category 1 or category 2 quantities of radioactive material; these materials are covered by other regulations. The thresholds for category 1 and category 2 quantities of radioactive material are provided in the following table. Terabecquerels is the official value to be used for determining whether a radioactive material is a category 1 or category 2 quantity. Because many licensees use curies in their activities instead of becquerels, the table provides the curie value at three figures for practical usefulness.

Radioactive Material	Category 1 Threshold		Category 2 Threshold	
	Terabecquerels (TBq)	Curies (Ci)	Terabecquerels (TBq)	Curies (Ci)
Americium-241	60	1,620	0.6	16.2
Americium-241/Beryllium	60	1,620	0.6	16.2
Californium-252	20	540	0.2	5.40
Curium-244	50	1,350	0.5	13.5
Cobalt-60	30	810	0.3	8.10
Cesium-137	100	2,700	1	27.0
Gadolinium-153	1000	27,000	10.0	270
Iridium-192	80	2,160	0.8	21.6
Plutonium-238	60	1,620	0.6	16.2
Plutonium-239/Beryllium	60	1,620	0.6	16.2

Promethium-147	40,000	1,080,000	400	10,800
Radium-226	40	1,080	0.4	10.8
Selenium-75	200	5,400	2.0	54.0
Strontium-90 (Yttrium-90)	1,000	27,000	10.0	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3	81.0

These materials and thresholds are based on the IAEA Code of Conduct. The NRC and the international community, led by the IAEA, revised the IAEA Code of Conduct in 2003 to establish common international guidance for safety and security measures for radioactive sources. The IAEA published these results in a document titled “Code of Conduct on the Safety and Security of Radioactive Sources.” A link to this document can be found on the NRC website at <http://www.nrc.gov/security/byproduct/enhanced-security.html>. In a separate effort, the U.S. Department of Energy (DOE) and the NRC reviewed the chemical, physical, and radiological characteristics of each radioactive material that is licensed in the United States, for its attractiveness to a terrorist. This effort identified 16 radioactive materials that could pose a serious threat to people and the environment. This effort further identified the different quantities or “thresholds” of materials that could be useful to a terrorist. The results of the DOE/NRC effort closely matched the Code of Conduct Category 2 quantities. The NRC adopted the IAEA Code of Conduct Category 1 and Category 2 threshold quantities to provide consistency between domestic and international efforts for security of radioactive materials that are deemed to be attractive targets for malevolent use.

IAEA, Safety Series RS-G-1.9, Categorization of Radioactive Sources, provides the underlying methodology for the development of the Code of Conduct thresholds. Safety guide RS-G-1.9 provides a risk-based ranking of radioactive sources in five categories in terms of their potential to cause severe deterministic effects for a range of scenarios that include both external exposure from an unshielded source and internal exposure following dispersal. The

categorization system uses the 'D' values as normalizing factors. The 'D' value is the radionuclide specific activity of a source that, if not under control, could cause severe deterministic effects for a range of scenarios that include both external exposure from an unshielded source and internal exposure following dispersal of the source material.

#### 6. *Why Are the Requirements Limited to These 16 Radionuclides?*

The Radiation Source Protection and Security Task Force, an interagency task force established by the EPA, concluded in its 2006 report to Congress and the President (ADAMS ML062190349) that the appropriate radioactive sources were being protected and that the IAEA Code of Conduct serves as an appropriate framework for considering which sources warrant additional protection. The Task Force did note that the U.S. Government should periodically reevaluate the list of radionuclides that warrant additional security and protection. Therefore, the radionuclides and thresholds could change in the future and any changes would be addressed in a future rulemaking.

#### 7. *What is the Sum of Fractions Methodology or Unity Rule?*

The sum of fractions methodology, also known as the unity rule, is used to determine if a licensee would be required to implement 10 CFR part 37 requirements. A licensee may need to implement the requirements in 10 CFR part 37 even if it does not possess any single source or single radionuclide in excess of the category 2 thresholds. For combinations of materials (to include sealed sources, unsealed sources, and bulk material) and radionuclides, a licensee must include multiple sources (including bulk material) of the same radionuclide and multiple sources (including bulk material) of different radionuclides to determine if the requirements apply. For the purposes of this calculation, licensees would be required to consider all of the radioactive material at a facility. The following formula for the unity rule would be used to determine if a licensee is required to implement the Part 37 requirements:  $[(\text{total amount of radionuclide A}) \div (\text{category 2 threshold of radionuclide A})] + [(\text{total amount of radionuclide B}) \div$

(category 2 threshold of radionuclide B)] + etc..... $\geq$  1. If the sum is greater than or equal to 1, the licensee would have at least a category 2 quantity of radioactive material, and the 10 CFR part 37 requirements would apply at that facility.

8. *Does the NRC Plan To Issue Guidance on These Proposed Requirements?*

Yes, the NRC plans to issue guidance on the security requirements for category 1 and category 2 quantities of radioactive materials. The guidance will be made available for public comment sometime during the comment period for this proposed rule. The NRC is planning to host at least one public workshop on the guidance documents. A separate document announcing the availability of the guidance and the information on the workshop will be published in the *Federal Register*.

9. *Will All of the Information Considered to be Safeguards Information Under the Orders Now be Made Public?*

No. The orders issued to some licensees contained detailed security information that could be useful to an adversary. To increase public awareness and participation, the NRC identified the primary security concepts behind each security measure and included these concepts in the proposed rule to allow discussion of the security measures in a public forum. But the specific measures that a licensee puts in place may be considered SGI-M. The final rule on safeguards information became effective on February 23, 2009 (73 FR 63546; October 24, 2008), and established as SGI-M certain physical protection information related to panoramic and underwater irradiators that possess greater than 370 TBq (10,000 Ci) of byproduct material in the form of sealed sources; manufacturers and distributors of items containing source material, byproduct material, or special nuclear material in greater than category 2 quantities; and transportation of source, byproduct, or special nuclear material in greater than or equal to category 1 quantities. Physical protection information for other facilities that fall under the requirements of 10 CFR part 37 would be considered physical protection

information under 10 CFR 2.390(d)(1). Licensees would also be required to protect the security plan and implementing information from unauthorized disclosure. The rule provisions that address SGI-M or include references to the SGI-M requirements in part 73 are reserved for the NRC and are considered compatibility category NRC.

10. *What is the Authority for This Proposed Rule?*

As noted in the background discussion, the NRC issued some orders under its authority to protect the common defense and security and some orders under its authority to protect the public health and safety. With respect to whether the following regulations are being issued under “public health and safety” or “common defense and security,” it should be recognized that almost all regulations relating to the security of materials serve both purposes to some degree. For example, securing radioactive materials with multiple barriers protects the public health and safety by preventing the unknowing theft of radioactive materials—such as someone stealing a vehicle with material stored in the vehicle but whose target is the vehicle—which could result in the unintentional exposure of members of the public to the material. The barriers also protect the common defense and security by preventing the theft of the radioactive material by potential terrorists or others targeting the specific material intending to use it to affect the common defense and security by exposing members of the public to the material. However, the designation of the authority being used for these regulations does have significance in determining whether Agreement States or the NRC will be responsible for overseeing the implementation of these requirements for Agreement State licensees.

Although the NRC relinquishes its regulatory authority to Agreement States for certain materials, under Section 274(m) of the AEA no such agreement will affect the authority of the Commission to take regulatory action to protect the common defense and security. Thus, as evidenced by orders issued to Agreement State licensees after the events of September 11, 2001, the NRC always has the ability to take necessary steps to address particular common



defense and security needs. If these regulations were to be issued under the NRC's common defense and security authority, only the NRC would have the authority to impose these requirements on Agreement State licensees and the NRC would be responsible for inspection and enforcement of these requirements for Agreement State licensees.

When regulations such as these complement both the NRC's public health and safety and common defense and security missions, the operative question is whether NRC oversight is necessary to fulfill the common defense and security aspects of the regulations. The NRC believes that the Agreement States can consistently and adequately implement the physical protection requirements on a nationwide basis, and as such, there will be no need for independent NRC action to protect the common defense and security. The NRC has regular oversight of individual Agreement State programs through its Integrated Materials Performance Evaluation Program (IMPEP). As always, the NRC retains the authority under Section 274(m) to take any necessary actions for protection of the common defense and security should individual licensees or State programs develop issues requiring immediate action. The Commission also has the authority under Section 274(j) to terminate or suspend all or part of its agreement with a State and reassert the Commission's licensing and regulatory authority when the Commission determines that doing so is necessary to protect the public health and safety. The failure of an individual Agreement State to implement compatible and adequate legally binding requirements to protect radioactive materials within its jurisdiction disrupts the entire national scheme to protect radioactive materials such that it might raise serious public health and safety or common defense and security concerns that the NRC would have to address. As long as all Agreement States continue to implement compatible and adequate security requirements, there appears to be no benefit to the public health and safety, or common defense and security, that would justify removing oversight of these requirements from an established regulatory program overseeing Agreement State licensees. Implementing these

regulations under the NRC's public health and safety authority would avoid potential complications with licensees being subject to dual regulation for a single activity. Thus, the NRC is proposing to issue these regulations under its public health and safety authority, and these requirements will be applicable to Agreement State licensees through the Agreement State Program.

11. *When Would the Rule be Effective?*

The NRC is recommending that the final rule be effective 180 days after publication in the *Federal Register*. This would provide time for licensees to put in place the necessary programs, develop procedures, and conduct training on the new requirements. While most of the provisions are similar to those contained in the orders, there are differences. The Agreement States would be required to issue compatible requirements within 3 years. Licensees in an Agreement State would continue to operate under the orders or other legally binding requirements until the Agreement State issues compatible requirements. The provisions put in place for the inspection of licensees in Agreement States that received the orders issued under common defense and security would remain in place until the Agreement State implements the requirements. For those States that entered into 274i Agreements, the State would continue inspections under the Agreement. For those States that did not enter into 274i Agreements, the NRC would continue to conduct the inspections until the State puts in place the new requirements. The NRC would rescind the orders as the regulatory requirements become effective.

12. *How Does the NRC Ensure Licensees are Following These Rules?*

The NRC and Agreement States conduct inspections to ensure that licensees are following the requirements. The NRC and Agreement State inspectors have received training and follow inspection procedures on how to ascertain whether licensees are meeting security

requirements. Potential violations that are identified will be processed in accordance with the NRC Enforcement Policy, and depending on the severity of a violation, licensees could be subject to civil or criminal penalties. Additionally, the NRC has developed enforcement guidance to ensure consistency in the enforcement process. Agreement State licensees would be subject to the State's enforcement process.

### 13. *What Should I Consider as I Prepare My Comments to the NRC?*

Tips for preparing your comments - when submitting your comments, remember to:

- i. Identify the rulemaking (RIN 3150-AI12, NRC-2008-0120).
- ii. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- iii. Describe any assumptions and provide any technical information and/or data that you used.
- iv. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- v. Provide specific examples to illustrate your concerns, and suggest alternatives.
- vi. Explain your views as clearly as possible.
- vii. Make sure to submit your comments by the comment period deadline identified.
- viii. The NRC is particularly interested in your comments concerning the following issues in Section II: (1) item B5 of this document contains a request for comment on whether the reviewing official should be fingerprinted as part of the trustworthiness and reliability determination; (2) item B8 contains a request for comment on the elements of the background investigation; (3) item C6 contains a request for comment on the protection of information; (4) item C15 contains a request for comment on the need to notify the LLEA before working at a temporary jobsite; (5) item C17 contains a request for comment on vehicle disabling requirements for mobile sources; (6) item D4 contains a request for comment on requiring license verification before transferring category 2 quantities of radioactive material; and (7) item

D21 contains a request for comment on requiring an NRC-approved monitoring plan for the classification yard for rail shipment. In addition, Section V of this document contains a request for comment on the compatibility designations for the proposed rule; Section VI contains a request for comment on the use of plain language; Section VIII contains a request for comment on the environmental assessment; Section IX contains a request for comment on the information collection requirements; Section X contains a request for comment on the draft regulatory analysis; and Section XI contains a request for comment on the impact of the proposed rule on small businesses.

## B. Background Investigations and Access Authorization Program

### 1. *Who Would Be Required to Have an Access Authorization Program?*

Any licensee that is authorized to possess category 1 or category 2 quantities of radioactive materials at a facility would need to determine whether it needs to have an access authorization program. The licensee would be required to submit information to the NRC concerning its compliance with the access authorization program requirements. The information should include a statement that the licensee is or is not implementing an access authorization program. The statement should not include details of the licensee's access authorization program or implementing procedures. Only those licensees that permit unescorted access to category 1 or category 2 quantities of radioactive material would be required to establish and implement an access authorization program. In addition, any applicant for a license or license amendment to possess category 1 or category 2 quantities of radioactive material at a facility would be required to establish an access authorization program before obtaining the radioactive material.

### 2. *What is the Objective of the Access Authorization Program?*

The main objective of the access authorization program is to ensure that individuals who have unescorted access to category 1 or category 2 quantities of radioactive material are trustworthy and reliable and do not constitute an unreasonable risk to the public health and safety or common defense and security.

### *3. Who Would be Subject to The Licensee's Access Authorization Program?*

The EPA Act authorizes the Commission to require fingerprinting of any individual who is permitted unescorted access to "any radioactive material that the Commission determines to be of such significance to the public health and safety or the common defense and security as to warrant fingerprinting and background checks." The Commission has determined that the threshold that warrants fingerprinting and background checks is category 2. Therefore, individuals subject to a licensee's access authorization program would include anyone permitted to have unescorted access to category 1 or category 2 quantities of radioactive material. Unescorted access would be defined as solitary access to category 1 or category 2 quantities of radioactive material granted to an approved individual, and includes solitary access to sufficient quantities of radioactive material such that an individual could successfully accumulate lesser quantities of material into a category 1 or category 2 quantity. This would be an individual at the licensee's facility who has access to various locations within the licensee's facility and does not address the situation where a contractor might have access to the facilities of several licensees.

The access authorization program would also include individuals that have access to SGI-M, such as vehicle drivers and accompanying individuals for road shipments of category 1 quantities of radioactive material, movement control center personnel for shipments of category 1 quantities of radioactive material, and any individual whose assigned duties provide access to shipment information on category 1 quantities of radioactive material. In response to

comments on the preliminary rule language, the NRC added text to clarify that “access to shipping information” referred to shipping information that was considered to be SGI-M and not all shipping information.

Those individuals who have unescorted access to certain quantities of byproduct material could pose a threat to the public health and safety or the common defense and security because they could divert or steal risk-significant radioactive material, or could aid others in the commission of such acts. The Radiation Source Protection and Security Task Force encouraged the NRC to require fingerprinting and Federal criminal history checks of any individual with access to category 1 or category 2 quantities of radioactive material.

Certain categories of individuals would be relieved from the background investigation aspect of the access authorization program (see Section II, question B20 and B21). Licensees do have the option to escort an individual and not make a trustworthiness and reliability determination. The escorts would need to be approved for unescorted access.

In response to comments on the preliminary rule language, the NRC removed a restriction that would prohibit a licensee from granting unescorted access to anyone that had been previously denied unescorted access. The NRC agreed that this was too limiting as information upon which a denial is based could change, and the individual could be unfairly denied access in the future.

#### *4. What are The Key Access Authorization Program Requirements?*

The key components of an access authorization program would be the reviewing official, the informed consent of the subject individual, personal history disclosure by the subject individual, a background investigation, use of procedures, and the individual’s right to correct and complete the information on which the decision to grant unescorted access is based. Each of these areas is discussed in more detail in the following questions and answers.

##### 5. *What is The Role of the Reviewing Official?*

The reviewing official would be the individual that makes the trustworthiness and reliability determinations for the licensee; the reviewing official determines who could be granted unescorted access authorization. Note that the Increased Control Fingerprinting Orders referred to a trustworthiness and reliability official or T&R official as the individual that made determinations on an individual's trustworthiness and reliability. Unlike the reviewing official the T&R official did not have to be fingerprinted and was not reviewed by the regulator. Licensees would need to nominate one or more individuals to be a reviewing official and submit their fingerprints to the NRC. The fingerprints of the nominated individual(s) would need to be taken by either a law enforcement agency, a Federal or State agency that provides fingerprinting services to the public, or a commercial fingerprinting service authorized by a State to take fingerprints. Before sending the nominated individual's fingerprints to the NRC, the licensee would need to conduct the rest of the elements of the background investigation. Reviewing officials must be permitted either access to safeguards information or unescorted access to category 1 or category 2 quantities of radioactive material. The NRC would then transmit the nominated reviewing official's fingerprints to the FBI and would review the individual's criminal history records and, if appropriate, approve the reviewing official. Reviewing officials would not be able to make trustworthiness and reliability determinations until approved by the NRC. For certain licensees, the NRC may have already approved reviewing officials, either under the October 17, 2006, orders [(EA-06-248, 71 FR 63043; October 27, 2006), (EA-06-250, 71 FR 53046; October 27, 2006), and (EA-06-249; 71 FR 62303; October 24, 2006)], under the August 21, 2006, SGI-M orders, or under other regulatory requirements. In those cases, the reviewing official may continue to act in that capacity for an expanded set of persons. If the reviewing (or T&R) official has not had an FBI criminal records

history check, he or she would need to be fingerprinted and receive NRC approval before making additional trustworthiness and reliability determinations. The NRC believes that it is important that the individual who is making the final determination on whether an individual is trustworthy and reliable be trustworthy and reliable themselves and have undergone the same background investigation as individuals who would be granted unescorted access, including fingerprinting and the FBI criminal records check. If the reviewing official is not fingerprinted, a gap could be created in the security program that could potentially be exploited. The NRC is specifically requesting comment on this aspect of the proposed access authorization program. In developing comments on this issue, consider the following questions:

(1) Does the reviewing official need to be fingerprinted and have a FBI criminal records check conducted?

(2) Are the other aspects of the background investigation adequate to determine the trustworthiness and reliability of the reviewing official?

(3) Are there other methods that could be used to ensure that the reviewing official is trustworthy and reliable?

(4) Does the requirement to fingerprint the reviewing official place too large of a burden on the licensee?

(5) Do Agreement States have the necessary authority to conduct reviews of the nominated individual's criminal history record?

#### 6. *What is Informed Consent?*

Informed consent is the authorization provided by an individual that allows a background investigation to be conducted to determine whether the individual is trustworthy and reliable. The signed consent would include authorization to share personal information with other individuals or organizations as necessary to complete the background investigation. An



individual would be able to withdraw his or her consent at any time. After the withdrawal, the licensee would not be able to initiate any elements of the background investigation that were not in process at the time of the withdrawal of consent. The licensee would be required to inform the individual that withdrawal of consent for the background investigation would be sufficient cause for denial or termination of unescorted access authorization.

Licensees do not need to obtain signed consent from individuals that have already undergone a background investigation that included fingerprinting and an FBI criminal history records check, been determined to be trustworthy and reliable, and permitted unescorted access to category 1 or category 2 quantities of radioactive material under the NRC orders or the legally binding requirements issued by the Agreement States. A signed consent would be needed for any reinvestigation.

In response to comments on the preliminary rule language, the NRC removed provisions for retention of background investigation information if the individual withdraws consent. If the individual later seeks unescorted access, the background investigation information collected during the original attempt could no longer be relied on, and the investigation would need to be restarted. Requiring the preservation of this information would place an unnecessary burden on licensees.

#### *7. What is a Personal History Disclosure?*

The personal history disclosure is the personal history required to be provided by the individual seeking unescorted access to category 1 or category 2 quantities of radioactive material. The information would include items such as employment history, education, credit history (including bankruptcies), and any arrest record. This information would provide the reviewing official with a starting point for the background investigation. Failure to provide the information or falsification of any information could be grounds for denial of the individual's

request for unescorted access authorization or termination of access if the individual already has access. If the individual provides false information, it could be an indication that he or she is not trustworthy or reliable.

#### 8. *What are The Components of a Background Investigation?*

A background investigation includes several components: fingerprinting and an FBI identification and criminal history records check; verification of true identity; employment history evaluation; verification of education; credit history evaluation; criminal history review; and character and reputation determination.

It is the licensee's responsibility to make a trustworthiness and reliability determination of an employee, contractor, or other individual who would be granted unescorted access to category 1 or category 2 quantities of radioactive material or a device containing such radioactive material. It is expected that licensees will use their best efforts to obtain the information required to conduct a background investigation to determine an individual's trustworthiness and reliability.

The full credit history evaluation reflects the Commission's intent that all financial information available through credit reporting agencies is to be obtained and evaluated as part of the trustworthiness and reliability evaluation. The Commission recognizes that some countries may not have routinely accepted credit reporting mechanisms. Therefore, the Commission allows reviewing officials to use multiple sources of credit history that could potentially provide information about a foreign national's financial record and responsibility.

Fingerprinting an individual for a FBI criminal history records check is an important element of the background investigation. It can provide comprehensive information regarding an individual's recorded criminal activities within the U.S. and its territories and the individual's known affiliations with violent gangs or terrorist organizations.

The background investigation is a tool to determine whether individuals are trustworthy and reliable and could be permitted unescorted access to category 1 or category 2 quantities of radioactive material. It is essential to ensure that individuals seeking unescorted access to radioactive material are dependable in judgment, character, and performance, such that unescorted access to category 1 or category 2 quantities of radioactive material by that individual does not constitute an unreasonable risk to the public health and safety or common defense and security.

The NRC is specifically inviting comment on the elements of the background investigation. Please consider the following questions in developing comments:

(1) Is a local criminal history review necessary in light of the requirement for a FBI criminal history records check?

(2) Does a credit history check provide valuable information for the determination of trustworthiness and reliability?

(3) Do the Agreement States have the authority to require a credit history check as part of the background investigation?

(4) What are the appropriate elements of a background investigation and why are any suggested elements appropriate?

(5) Are the elements of the background investigation too subjective to be effective?

(6) How much time does a licensee typically spend on conducting the background investigation for an individual?

#### 9. *Where Does a Licensee Submit the Fingerprints for Processing?*

Under the EPCRA, licensees are required to submit the fingerprints to the NRC, which forwards the fingerprints to the FBI for processing. If an individual comes under one of the

relief categories specified in 10 CFR 37.29, the licensee would not need to submit the individual's fingerprints to the NRC.

*10. What Should a Licensee Do if an Individual or Entity Contacted as Part of a Background Check Refuses to Respond?*

If a previous employer, educational institution, or any other entity fails to provide information or indicates an inability or unwillingness to provide information in a timely manner, the licensee would be required to document the refusal, unwillingness, or inability to respond in the record of investigation. The licensee would then need to obtain confirmation from at least one alternate source that has not been previously used. In response to comments on the preliminary rule language, the NRC revised the rule language to provide more flexibility to licensees as to what would be considered a timely manner.

*11. Does an Individual Have the Right to Correct His or Her Criminal History Records?*

Yes, an individual has the right to correct his or her criminal history records before any final adverse determination is made. If the individual believes that his or her criminal history records are incorrect or incomplete in any respect, he or she can initiate challenge procedures. These procedures would include direct application by the individual challenging the criminal history records to the law enforcement agency that contributed the questioned information. Before an adverse determination on a request for unescorted access, individuals have the right to provide additional information.

*12. Is a Licensee Required to have Procedures for Conducting Background Investigations?*

Yes, licensees would be required to develop, implement, and maintain written procedures for conducting the background investigations. Procedures would address notification of individuals denied unescorted access authorization and would also ensure that individuals who have been denied unescorted access authorization are not allowed unescorted

access to category 1 or category 2 quantities of radioactive material (these individuals could be escorted by an approved individual.) The NRC agreed with comments on the preliminary rule language that the provision prohibiting even escorted access for those individuals denied unescorted access was too inflexible, licensees should be given the flexibility to escort individuals if they so choose.

The preliminary language also contained a provision that required a licensee to provide an opportunity for an independent management review if the individual was denied unescorted access. Several commenters noted that the requirement was too prescriptive and that a decision on whether and how to conduct a review should be left up to the licensee. The NRC agrees with the commenters and has not included the provision in the proposed rule.

*13. What Information Should the Reviewing Official Use to Determine that an Individual is Trustworthy and Reliable?*

The reviewing official would use all of the information gathered during the background investigation, including the information received from the FBI, in making a determination that an individual is trustworthy and reliable. The reviewing official may not determine that an individual is trustworthy and reliable and grant them unescorted access until all of the information for the background investigation has been obtained and evaluated. The reviewing official may deny unescorted access to any individual based on any information obtained at any time during the background investigation. However, the licensee may not base a final determination to deny an individual unescorted access to category 1 or category 2 quantities of radioactive material solely on the basis of information received from the FBI involving: (1) an arrest more than 1 year old for which there is no information of the disposition of the case; or (2) an arrest that resulted in dismissal of the charge or an acquittal. If there is no record on the disposition of the case, it may be that information on a dismissal or acquittal was not recorded.

14. *How Frequently Would a Reinvestigation Be Required?*

A reinvestigation would be required every 10 years to help maintain the integrity of the access authorization program. This is necessary because an individual's financial situation or criminal history may change over time in a manner that can adversely affect his or her trustworthiness and reliability. The reinvestigation would include the local criminal history review and credit history check, but would not include identification through fingerprinting, employment verification, or the character and reputation determination.

15. *Are Licensees Required to Protect Information Obtained During a Background Investigation?*

Yes, licensees would be required to protect the information obtained during a background investigation. The licensee would be required to establish and maintain a system of files and procedures for protection of the information from unauthorized disclosure. Licensees would only be permitted to disclose the information to the subject individual, the individual's representative, those who have a need-to-know the information to perform their assigned duties to grant or deny unescorted access to category 1 or category 2 quantities of material or safeguards information, or an authorized representative of the NRC.

16. *Could a Licensee Transfer Personal Information Obtained During an Investigation to Another Licensee?*

Yes, a licensee would be able to transfer background information on an individual to another licensee if the individual makes a written request to the licensee to transfer the information contained in his or her file.

17. *If I Receive Background Investigation Information From Another Licensee, Can I Rely on That Information?*

Yes, a licensee would be able to rely on the background investigation information that is

transferred from another licensee. However, a licensee would be required to verify information such as name, date of birth, social security number, gender, and other physical characteristics to ensure that the individual is the person whose file has been transferred.

18. *What Records Are Required to be Maintained?*

Licensees would be required to retain all fingerprint and criminal history records received from the FBI, or a copy if the individual's file has been transferred, for 5 years after the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material. Licensees would also be required to retain the written confirmation received from entities concerning a security clearance or favorably adjudicated criminal history records check and any written verifications received from service providers. In response to comments on the preliminary rule language, the NRC revised the record retention requirements so that the language was consistent throughout subpart B of 10 CFR part 37.

19. *How Would a Licensee Determine the Effectiveness of the Access Authorization Control Program?*

Licensees would be required to review their program to confirm compliance with the requirements. The review would evaluate all program performance objectives and requirements, would document any findings and corrective actions, and would be conducted annually. Any records would need to be maintained for 5 years. Commenters on the preliminary rule language suggested that the review period should be annual for consistency with the radiation protection program review. The NRC agrees and changed the review frequency from 24 months to 12 months.

20. *Would Individuals Transporting Radioactive Material Be Subject to the Background Investigation Requirements?*

As part of this rulemaking, the NRC considered what level of responsibility to place on its licensees regarding fingerprinting and criminal history records checks for persons involved in the transportation of category 1 and category 2 quantities of radioactive material. Licensees covered by the fingerprinting and criminal history records check requirements of this proposed rule may decide to transfer radioactive material away from the site or may receive radioactive material from another entity.

Such transfers or receipts may occur either as part of a shipment to or from a domestic company or an international company. Individuals involved in the shipment, in particular those employed by carriers or other organizations handling shipments, may have unescorted access to the material during the shipment process. These persons may not be employees of the licensee and thus may not be under the licensee's direct control. In this regard, proposed § 37.21(c) directs that licensees subject certain classes of individuals to the access authorization program. Specifically, the NRC is proposing that vehicle drivers and accompanying individuals for road shipments of category 1 quantities of radioactive material, movement control center personnel for shipments of category 1 quantities of radioactive material, and any individual whose assigned duties provide access to shipment information on category 1 quantities of radioactive material that is considered to be SGI-M, all be fingerprinted and undergo background investigations. This was discussed in Section II, question B3 of this document.

*21. Who Would Be Relieved From the Background Investigation Requirements?*

Under section 149.b. of the AEA, the NRC may, by rule, relieve individuals from the fingerprinting, identification, and criminal history records check requirements if it finds that such action is "consistent with its obligations to promote the common defense and security and to protect the health and safety of the public." The NRC issued a final rule relieving certain



individuals who are permitted unescorted access to radioactive materials from the fingerprinting, identification, and criminal history records checks required by section 149.a. of the AEA (72 FR 4945; February 2, 2007). The individuals relieved from fingerprinting, identification, and criminal history records checks under that rule include Federal, State, and local officials involved in security planning; Agreement State employees who evaluate licensee compliance with security-related orders; and other government officials who may need unescorted access to radioactive materials or other property subject to regulation by the Commission as part of their oversight function. The categories of individuals relieved by the rule also include the same individuals as those previously relieved in an earlier rulemaking from fingerprinting and criminal history records check requirements applicable to safeguards information (71 FR 33989; June 13, 2006).

Under this proposed rule, the Commission proposes to use the same listing of categories of individuals with the following modifications. Emergency response personnel who are responding to an emergency would be relieved from the requirements because it is impossible to predict when emergency access might be necessary. Employees of carriers that transport category 2 quantities of radioactive material would also be relieved. The NRC will rely on the U.S. Department of Transportation (DOT) and the Transportation Security Administration programs for background investigations of these personnel.

The individuals that would be relieved from the background investigation requirements are considered trustworthy and reliable by virtue of their occupational status and have either already undergone a background investigation as a condition of their employment, or are subject to direct oversight by government authorities in their day-to-day job functions.

Certain persons, as part of the duties of their specific occupation, may be separately or previously subject to background investigations, either as a result of NRC requirements (as

under other requirements for access to SGI or SGI-M) or as a result of requirements of other agencies. These persons would not be subject to separate background investigation requirements under this proposed rule; individuals who have undergone a background investigation, including fingerprinting, and found acceptable for unescorted access under provisions of other such requirements would not need to undergo another background investigation nor would a separate determination of their trustworthiness and reliability need to be made.

This rule would not authorize unescorted access to any radioactive materials or other property subject to regulation by the Commission. Rather, the rule would make clear that a licensee may permit unescorted access to certain categories of individuals otherwise qualified for access without performing a background investigation. Licensees would still need to decide whether to grant or deny an individual unescorted access independently of this proposed provision. Any required training would need to be conducted before granting unescorted access.

### C. Physical Protection During Use

#### 1. *Who Would Be Affected by the Proposed Requirements?*

Within 30 days of the effective date of the final rule, each licensee that is authorized to possess category 1 or category 2 quantities of radioactive material would need to submit information to the NRC concerning the licensee's compliance with the security requirements. The information should include a statement that the licensee is implementing a security program. The licensee should not submit details of the licensee's security program, implementing procedures, security plan, or other sensitive information.

Any licensee that possesses an aggregated category 1 or category 2 quantity of radioactive material would be required to establish, implement, and maintain a security program

meeting the requirements of 10 CFR subpart C of the proposed rule. (The NRC would consider material to be “aggregated” if an adversary could gain access to a category 2 or greater quantity by breaching a common physical barrier.)

Any licensee that is authorized to possess at least a category 2 quantity of radioactive material would be required to develop a security program. However, the licensee would not be required to implement the security program unless the licensee aggregated the material into a quantity equal to or exceeding the category 2 threshold. At least 90 days before aggregating the radioactive material to a category 2 quantity or greater, the licensee would be required to notify the NRC in writing and implement its security program. This advance notification would provide time for NRC to inspect the licensee’s security program before the licensee actually aggregated the material.

The NRC recognizes that some licensees may not always have quantities of radioactive material that equal or exceed category 2, and may not always have a 90-day notice of the need to cross the threshold for implementing the security program. Accordingly, the proposed rule also includes provisions to cover situations where a licensee may routinely, but not continuously, possess aggregated quantities of radioactive material at or above the category 2 threshold. A licensee whose aggregated quantity of radioactive material fluctuates above and below the category 2 threshold more than once in a 90-day period and thereafter would only need to notify the NRC the first time that the security program is implemented. This notice could then serve to inform the NRC that the licensee will be periodically implementing the security provisions. If the fluctuation in aggregated quantity does not reach the category 2 threshold more than once in a 90-day period, the licensee would need to notify the NRC each time a previously discontinued or new security program is to be implemented. These provisions are intended to cover the situation where a licensee routinely, but not continuously, has

aggregated quantities of radioactive material at or above the category 2 threshold so that they do not need to report to NRC each time the material is aggregated. This provides a licensee who may not have 90 days notice an acceptable means to inform the NRC that they will be periodically implementing the security provisions.

To illustrate how aggregation might work, here are two examples of a hospital system with a license to possess materials at different sites. Hospital A is authorized to possess 0.4 TBq (11 Ci) of cesium-137 at location 1, 0.7 TBq (19 Ci) at location 2, and 0.9 TBq (24 Ci) at location 3, each several miles apart. Hospital A would be required to develop a security program because the total authorization of 2 TBq (54 Ci) is more than the category 2 threshold. However, Hospital A would not be required to implement the security program because no single location is authorized to possess a quantity that could be aggregated to the category 2 threshold of 1TBq (27 Ci). Hospital B, on the other hand, is authorized to possess 0.4 TBq (10.8 Ci) of cesium-137 at location 1, 0.5 TBq (13.5 Ci) at location 2, and 1.1 TBq (29.7 Ci) at location 3. Hospital B's total authorization is also 2 TBq (54 Ci), but Hospital B would be required to develop a security program and implement the program for location 3 if all the material at that location is aggregated within a single physical barrier, such as a locked room, because the total quantity possessed is above the category 2 threshold of 1 TBq (27 Ci). Therefore, Hospital B would have to either add another physical barrier to isolate the aggregated material; separate the material into quantities less than category 2 quantities and place each behind at least one independent physical barrier; or develop and implement a security program at location 3.

*2. What is the Objective of the Security Program and What are the Key Security Program Requirements?*

The proposed rule would require affected licensees to establish, implement, and maintain a security program. The objective of the security program would be to monitor, and without delay detect, assess, and respond to any actual or attempted unauthorized access to category 1 or category 2 quantities of radioactive materials. The objective was slightly revised to address actual or attempted unauthorized access in response to comments on the preliminary rule language. A licensee's security program would include a written security plan, implementing procedures, training, use of security zones, protection of information, coordination with the LLEA, testing and maintenance of security-related equipment, security measures, and a program review. Each of these areas is discussed in more detail in the following questions and answers.

### *3. What Should a Licensee's Security Plan Address?*

The purpose of a security plan is to establish, in writing, the licensee's overall security strategy to ensure that all of the required security measures work effectively and in an integrated way for all facilities and operations where category 1 or category 2 quantities of radioactive material will be used or stored. The plan would, among other things, include a description of the measures and strategies to implement the security requirements and describe any site-specific conditions that affect how the licensee will implement the requirements.

A licensee would be able to revise its security plan to address changing circumstances. Any changes to the security plan, as well as the original plan, would be approved by the individual with overall responsibility for the security program. The security plan would be retained until the Commission terminates the license, and any superseded portions would be retained for 5 years.

Security plans are important for the implementation of a performance-based regulation. An adequate plan requires a licensee to analyze the particular security needs of its individual facilities and to explain how it will implement its chosen security measures to ensure that they work together to meet the applicable performance objectives.

#### *4. Would a Licensee be Required to have Security Procedures?*

Yes, licensees would be required to develop and maintain written implementing procedures that document how the security requirements and the security plan would be met. These procedures must be designed to meet the individualized security needs of each site where a category 1 or category 2 quantity of radioactive material is used or stored. Procedures would need to be approved, in writing, by the individual with overall responsibility for the security program. The licensee would be required to keep a copy of the current procedures as a record until the Commission terminates the license. Superseded portions of the procedures would be retained for 5 years. Licensees should not submit procedures to the NRC as part of the license.

#### *5. What Training Would be Required?*

As part of its physical protection program, each licensee would be required to conduct training on the security plan to ensure that those individuals responsible for implementation of the plan possess and maintain the knowledge, skills, and abilities to carry out their assigned duties and responsibilities effectively. The extent of the training would need to be commensurate with the individual's potential involvement in the security of category 1 or category 2 quantities of radioactive material. Individuals would have to be instructed in the licensee's security program and implementing procedures, their responsibilities, and the appropriate response to alarms. In guidance, licensees with dedicated security staff will be encouraged to train their security personnel in the timely notification of affected LLEAs during

emergencies. For improved coordination with LLEAs, such licensees will also be encouraged to train their security personnel using drills or table top exercises during integrated tests of their monitoring, detection, and response systems, and to notify affected LLEAs of opportunities to participate in such training.

An individual subject to the training requirements of § 37.43(c) would have to complete them before being permitted unescorted access to category 1 or category 2 quantities of radioactive material. The licensee would have to provide refresher training at least once every 12 months or when significant changes have been made to the security program. The refresher training would address any significant changes; reports on relevant security issues, problems, or lessons learned; relevant results from NRC inspections; and relevant results from the licensee's program review and the testing and maintenance program. Training records would be maintained for 5 years and would need to include training topics, training dates, and the list of personnel that attended the training. The rule language was revised to address comments on the preliminary rule language to clarify that refresher training would be necessary and to clarify what training records need to be maintained.

Training is essential if the licensee is to be adequately prepared for an effective and coordinated response to any effort to steal or divert category 1 or category 2 quantities of radioactive material. Adequate training is indispensable for an appropriate licensee response to an unauthorized intrusion.

*6. Would Licensees be Required to Protect Information Concerning Their Security Program?*

Yes. To prevent unauthorized disclosure, licensees would be required to limit access to their security plans and implementing procedures. These efforts would include measures to allow access to these documents only to those individuals who have a need to know the information to perform their duties and have been determined to be trustworthy and reliable

based on the background investigation requirements set forth in proposed § 37.25(a)(2) through (a)(10). Licensees would be required to store security information in a manner to prevent removal, such as storage in a locked office or desk drawer.

To ensure that only trustworthy and reliable individuals with a need to know are allowed access to security plans and procedures, licensees would have to develop, implement, and maintain, written policies and procedures to control access to their security plan and security procedures. The licensee's information protection policies and procedures would have to ensure the proper handling and protection of security plans and implementing procedures against unauthorized disclosure. Licensees would be required to retain copies of the policies and procedures.

For the purposes of this proposed requirement, licensees cannot fingerprint individuals or subject them to an FBI background investigation to permit them access to security plans or procedures, unless those individuals are also permitted unescorted access to Category 1 or 2 radioactive materials. Information previously obtained during the hiring process may be used to support a licensee's determination of an individual's trustworthiness and reliability without having to reverify that information. Licensees that have SGI or SGI-M would remain subject to the more stringent information protection requirements of 10 CFR 73.21, including fingerprinting and an FBI criminal records check.

The NRC is specifically inviting comment on the requirement to protect security-related information. Please consider the following questions in developing comments:

(1) Do the Agreement States have adequate authority to impose the information protection requirements in this proposed rule?

(2) Can the Agreement States protect the information from disclosure in the event of a request under a State's Freedom of Information Act, or comparable State law?



(3) Is the proposed rule adequate to protect the licensees' security plan and implementing procedures from unauthorized disclosure, are additional or different provisions necessary, or are the proposed requirements unnecessarily strict?

(4) Should other information beyond the security plan and implementing procedures be protected under this proposed requirement?

(5) Should the background investigation elements for determining whether an individual is trustworthy and reliable for access to the security information be the same as for determining access to category 1 and category 2 quantities of radioactive material (with the exception of fingerprinting)?

#### *7. What is the Purpose of a Security Zone?*

A security zone would be any area established by a licensee to provide physical protection for category 1 or category 2 quantities of radioactive material at a licensed facility. All category 1 and category 2 quantities of radioactive material at the facility would have to be used and stored within a security zone.

The purpose of security zones is to isolate and control access to the material to protect it more effectively and deter theft or diversion by providing, among other things, more time for licensees and LLEAs to respond. Isolation measures would protect category 1 or category 2 quantities of radioactive material by allowing access to security zones only through established access control points. Access control measures would allow only approved individuals to have unescorted access to the security zone, and ensure that other individuals with a need for access are escorted by approved individuals. A security zone effectively defines where the licensee will apply these isolation and access control measures.

To limit unescorted access to only approved individuals, licensees could isolate the radioactive materials using continuous physical barriers that allow access to the security zone

only through established access control points; or licensees could exercise direct control of the security zone by approved individuals at all times.

Security zones may be permanent or temporary. Temporary security zones would need to be established to meet transitory or intermittent operating requirements such as periods of maintenance, source delivery, and source replacement. A licensee could meet the proposed requirement for a security zone at some temporary job sites (such as those involving onsite operations lasting less than a day) simply by keeping the area under “direct supervision” by authorized personnel. Similarly, when work is being done inside a temporary zone, a licensee could meet the requirements for controlling unescorted access by having the material, persons, and area within the zone under direct control of approved individuals at all times.

Because the purpose of security zones is different from the radiation safety purposes of the restricted areas and controlled areas defined in 10 CFR part 20, the security zone does not have to be the same as either of these areas. Because measures to control access are required for both radiation protection and security, however, a licensee does have the flexibility to use an area required for radiation protection purposes to fulfill the required functions of a security zone. Thus, for a temporary well-logging operation within which the licensee is required by 10 CFR 39.71 to have a “restricted area” to “maintain direct surveillance ... to prevent unauthorized entry into a restricted area,” a licensee could define a security zone with the same boundaries as this “restricted area,” which is defined in 10 CFR 20.1003 as “an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials.” Similarly, a radiographer could choose to define a security zone with the same boundaries as the “high radiation area” over which radiography licensees are required by 10 CFR 34.51 to “maintain direct visual surveillance ... to protect against unauthorized entry.” (As defined in 10 CFR 20.1003, a “high

radiation area” is “an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of a 0.1 rem (1 mSv) in 1 hour at 30 centimeters from the radiation source or 30 centimeters from any surface that the radiation penetrates.”)

Because materials licensees are differently configured and do not lend themselves to generically defined physical areas, the security zone concept permits significant flexibility for licensees to account for a range of site-specific concerns. It also provides regulators with a well-defined and enforceable requirement keyed to performance objectives of isolation and access control.

*8. When Would Special Additional Measures for Category 1 Quantities of Radioactive Material be Required?*

One provision of the proposed rule would apply to category 1 quantities of radioactive material during periods of maintenance, source receipt, preparation for shipment, installation, or source removal or exchange. Licensees would be required to provide, at a minimum, an approved individual to maintain continuous surveillance of sources in temporary security zones and in any security zone in which physical barriers or intrusion detection systems have been disabled to allow the specified activities. The rule language was clarified in response to comments on the preliminary rule language.

Due to the natural decay of their radioactivity, sources lose their effectiveness as they get older and have to be replaced or replenished periodically with new sources to maintain a device’s expected performance. Tamper-indicating devices and other intrusion detection equipment typically must be disabled to permit the source to be opened without tripping alarms. The new sources are typically shipped by an offsite supplier, who also often performs removal and exchange or reinstallation. After replacement, the removed older sources must be

prepared onsite for shipment back to the manufacturer or for storage and eventual disposal. These nonroutine operations by nonlicensee employees at the licensee's site, during a time when devices for detecting theft or diversion are disabled, call for additional measures to compensate for the temporary increase in vulnerability.

*9. What Would be Required to Monitor and Detect an Unauthorized Entry Into a Security Zone?*

A licensee would be required to establish and maintain the capability to continuously monitor and detect all unauthorized entries into its security zone(s). Monitoring and detection would be performed by either a monitored intrusion detection system that is linked to an onsite or offsite central monitoring facility; electronic devices for intrusion detection alarms that would alert nearby facility personnel; visual monitoring by video surveillance cameras; or visual inspection by approved individuals. The rule language was clarified in response to comments on the preliminary rule language.

A licensee would also need the capability to detect unauthorized removal of the radioactive material. For category 1 quantities of radioactive material, a licensee would need to immediately detect any attempted unauthorized removal through the use of electronic sensors linked to an alarm or continuous visual surveillance. For category 2 quantities of radioactive material, a licensee would need to verify the presence of the radioactive material through weekly physical checks, tamper indicating devices, actual usage of the material, or other means.

*10. What are the Requirements for Personnel Communications and Data Transmission?*

Licensees would be required to maintain continuous capability for personnel communication and electronic data transmission and processing among site security systems for any personnel and automated or electronic systems used to support the site security

systems. Licensees would be required to have alternative capability for any system in the event of loss of the primary means of communication or data transmission and processing. The alternative means could not be subject to the same failure mode as the primary systems.

11. *What Would a Licensee Need To Do When it Detects an Intrusion into its Security Zone?*

A licensee's response to an intrusion would depend on the licensee's assessment of the purpose of the intrusion, but a response would be required without delay. If the unauthorized access appeared to the licensee to be an actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material, the licensee would have to immediately notify and request an armed response from the appropriate LLEA. An immediate response by the licensee would permit a more timely response from law enforcement, thereby reducing the risk that the material could be used for malevolent purposes. Immediate notification would also allow for early warning to other possible targets of a simultaneous attempt to divert material from multiple locations.

A licensee's decision to call the LLEA and the NRC would depend not only on the licensee's assessment of the intent of the unauthorized access but also on whether the area where the breach occurred is an area the licensee had previously determined needed to be monitored in order to meet the NRC physical protection requirements. Thus, a licensee's assessment and response to an intrusion alarm in the business office section of its facility could be entirely different from its assessment and response to an intrusion alarm in a radioactive materials storage area.

12. *Can a Licensee Use Automated Devices to Assess an Intrusion and Alert an LLEA?*

Depending on the security system, the layout of controlled areas, and the design capabilities of the sensors, automated devices or systems may be programmed to automatically summon LLEA assistance in response to an intrusion alarm.

### 13. *What Coordination Would be Required with Local Law Enforcement Agencies?*

Licensees would be required to coordinate, to the extent practicable, with the LLEA to discuss the LLEA response to threats to the licensee's facility. An LLEA would be defined as a government entity that has the authority to make arrests and the capability to provide an armed response. In the event of an actual or attempted theft, sabotage, or diversion of radioactive material, an armed response is likely to be necessary. Adversaries could be well armed, and the small unarmed or lightly-armed private security guard service typically used at byproduct material licensee sites would not be an adequate substitute for an LLEA. However, the LLEA need not be a municipal or county police force. If a hospital or university campus police force is the nearest law enforcement agency to the licensee's operation capable of providing an armed response and making arrests, that police force would meet the proposed definition of an LLEA.

A licensee would also have to consider whether the LLEA could provide the needed armed response at all times. Some LLEAs are on duty only during specified hours, and in such cases, the licensee would have to identify and coordinate with the closest LLEA able to provide an armed response and arrest perpetrators when the primary LLEA is off-duty.

Coordination activities include providing a description of the facility, radioactive materials, and security measures and notification that the licensee will request a timely and armed response to any actual or attempted theft, sabotage, or diversion of the licensee's radioactive materials. Coordination activities also include requesting information from the LLEA concerning the LLEA's capabilities to provide a timely armed response and to participate in drills or exercises, and requesting a contact in order to establish a means of direct communication. The licensee would be required to request that the LLEA enter into a written agreement with the licensee that describes the LLEA's commitments to provide a response. The licensee would be required to document its coordination efforts, including the dates, times,

and locations of meetings and a list of licensee and LLEA staff present at the meetings. Licensees would be required to update their security plans with affected LLEAs every 12 months. At the suggestion of a commenter on the preliminary rule language, the NRC has added a new provision for the licensee to request that the LLEA notify the licensee when the LLEA's response capabilities become degraded. This is not intended to address a short-term situation where the LLEA may be responding to another emergency, but to address conditions that would last for a longer timeframe, such as a severe shortage of law enforcement personnel during a recovery from a natural disaster.

Coordination with an LLEA is essential in developing an effective and efficient physical protection program. Because certain situations may necessitate an armed response, a strategy that is consistent in scope and timing with realistic potential vulnerabilities of the subject radioactive material should be coordinated well in advance with the LLEA. Another purpose of coordination is to provide the responsible LLEA with an understanding of the potential consequences associated with unauthorized use of the radioactive material of concern, so that the LLEA can determine the appropriate priority of its response. The LLEA response would be needed not only to interdict and disrupt an attempted theft or sabotage onsite, but possibly for offsite coordination to protect public health and safety, and to mitigate the potential consequences of unauthorized use of radioactive material.

#### 14. *What if the LLEA Declines to Coordinate with a Licensee?*

The NRC recognizes that it cannot exercise authority over LLEAs, or any party, over which a licensee has no control and the NRC has no legal jurisdiction. The NRC also recognizes that an LLEA may have good reasons, including resource limitations and possibly other coinciding events within its jurisdiction, for not entering into a formal agreement with a licensee.

An LLEA's refusal to coordinate with a licensee would not by itself render a licensee's security plan inadequate, however. In making its determination on the adequacy of the plan, the NRC will recognize that in an actual emergency, State and local government officials will respond to protect the health and safety of the public. A licensee would also be required under § 37.45(a)(2) to notify the appropriate NRC regional office within three business days if the LLEA has not responded to a request for coordination within 60 days of the coordination request; or if the LLEA notifies the licensee that the LLEA does not plan to participate in coordination activities. The purpose of this notification would be to allow NRC time to notify the Department of Homeland Security (DHS), or where necessary, contact the LLEA directly, to ensure that the LLEA understands the importance of adequate coordination. Through these interactions, the NRC would obtain confidence that the LLEA would respond in the event of an actual emergency. Thus, if the LLEA refuses to coordinate beforehand, the licensee could still comply by making and documenting periodic good-faith efforts to elicit the LLEA's participation in planning for a timely and effective response. The licensee would be required to notify the NRC if the LLEA declines to engage in coordination activities.

15. *What are the LLEA Notification Requirements for Work at a Temporary Job Site?*

For temporary job sites (i.e., locations not specifically identified by the license for possession of radioactive materials), the proposed rule would require licensees to provide advance written notification to the appropriate LLEA(s) at least 3 business days in advance if the licensee plans to use or store category 1 or category 2 quantities of radioactive material at the temporary job site for more than 7 consecutive calendar days. This requirement is intended to ensure that local law enforcement officers who might be summoned to such a job site in the event of a security incident are aware that they might be summoned, will know the potentially



affected location, and are able to reach responsible licensee representatives before the operations begin if the officers want additional information.

The NRC is proposing 7 consecutive calendar days as a threshold for the LLEA notification requirement in an effort to balance the need for timely LLEA awareness with the need to avoid licensee notification requirements that may be out of proportion to the security risks. The NRC is aware that some temporary job sites may only be in use by a licensee for several days a year on short notice and at unpredictable intervals. These circumstances make it difficult for individuals or groups to plan and execute theft, sabotage, or diversion even with the help of an insider.

The notification would need to include such things as the purpose of the notification, timeframe and location for the temporary work, information on the quantities of radioactive material to be used or stored at the site, and contact information.

The proposed notification requirement would not preclude a licensee from coordinating with an LLEA at a temporary job site, if the LLEA and licensee believe it would be beneficial to do so. Notification would give the LLEA essential information about the time, location, and nature of the activity so that the LLEA could be prepared to respond if necessary, and would provide the LLEA with an opportunity to request more information if needed.

The NRC is specifically inviting comment on the requirement to contact the LLEA for work at a temporary jobsite. Please consider the following questions in developing comments:

(1) Is there any benefit in requiring that the LLEA be notified of work at a temporary jobsite?

(2) Should notifications be made by licensees for work at every temporary jobsite or only those where the licensee will be working for longer periods, such as the 7 day timeframe proposed in the rule?

(3) If notifications are required, is 7 days the appropriate threshold for notification of the LLEA or should there be a different threshold?

(4) Will licensees be able to easily identify the LLEA with jurisdiction for temporary jobsites or does this impose an undue burden?

(5) Are LLEAs interested in receiving these notifications?

16. *Would a Licensee be Prohibited from Working at a Temporary Job Site if the Licensee Couldn't Notify the Affected LLEA(s) 3 Business Days in Advance?*

No. The proposed LLEA notification requirement for temporary job site operations provides for unforeseen circumstances under which a licensee might not be able to provide 3 business days written advance notice to the LLEA. If, due to an emergency or other unforeseen circumstances, a licensee is required to work at a temporary job site for more than 7 consecutive calendar days and is unable to provide the 3 days advance written notice to the LLEA before the licensee's trip to the site, the licensee would be required to provide as much advance notice as possible by telephone, facsimile, or e-mail.

17. *What are the Proposed Special Requirements for Mobile Sources?*

The proposed rule would require licensees using mobile devices containing a category 1 or category 2 quantity of radioactive material to have two independent physical controls that form tangible barriers to prevent unauthorized removal of devices. For devices in or on a vehicle or trailer, a licensee would be required to use a method to disable the vehicle or trailer when it is not under direct control and constant surveillance by the licensee. Licensees would not be allowed to rely on the removal of an ignition key to meet this requirement. These provisions are in addition to the other requirements in subpart C.

Mobile devices, particularly portable ones, are likely to be more vulnerable to attempted theft or diversion because an adversary could more easily remove these devices before the

licensee or LLEA has an opportunity to respond. The objective of this requirement is to delay intruders long enough for a timely licensee and LLEA response.

A mobile device is defined in the proposed rule as a piece of equipment containing licensed radioactive material that is either: (1) mounted on wheels or casters, or otherwise equipped for moving without a need for disassembly or dismounting; or (2) designed to be hand carried. Mobile devices do not include stationary equipment installed in a fixed location, such as an irradiator, but the proposed definition would include radiography cameras, source changers, well logging equipment, gauges or controllers, storage containers, lead pigs for holding sources during a source exchange, and onsite or offsite transportation packages.

Commenters on the preliminary rule language requested that the requirement to disable the vehicle or trailer when not under direct control and constant surveillance by the licensee be modified to provide an exception for oil and gas field service vehicles that may have to evacuate a work area quickly due to extreme hazard. The extra time needed to overcome a vehicle disabling feature could delay timely evacuation and result in bodily harm or death under certain operating conditions, such as fire or loss of well head pressure control. The NRC recognizes the need to balance security measures against health and safety concerns and is willing to consider some form of relief from the proposed vehicle disabling requirements. The NRC is specifically requesting comment on this issue. Please consider the following questions when developing comments on this issue:

(1) Should relief from the vehicle disabling provisions be provided?

(2) Have licensees experienced any problems in implementing this aspect of the Increased Controls?

(3) Should there be an exemption written into the regulations or should licensees with overriding safety concerns be required to request an exemption from the regulations to obtain

relief from the provision?

(4) If an exemption is included in the regulations, should it be a blanket exemption or a specific exemption for the oil and gas industry?

(5) Does the disabling provision conflict with any Occupational Safety and Health Administration requirements or any State requirements?

18. *What Maintenance, Testing, and Calibration Requirements Would Apply to the Security Systems?*

Licensees would be required to test intrusion alarms, physical barriers, and other systems used for securing and monitoring access to radioactive material, and these would have to be maintained in operable condition. Each intrusion alarm and associated communication system subject to the proposed rule's requirements for monitoring, detection, and assessment would have to be inspected and tested for performance as described in the licensee's security plan, but no less frequently than once every quarter. In guidance, licensees will also be encouraged to conduct periodic testing of the integrated functioning of their monitoring, detection, and response systems as a whole, including systems for notifying affected LLEAs. Licensees with dedicated security staff will also be encouraged to notify affected LLEAs of each opportunity to participate in drills or table top exercises when licensees conduct integrated tests of their monitoring, detection, and response systems. Licensees would be required to maintain records of the maintenance, testing, and calibration activities for 5 years.

19. *What Events Would a Licensee Need to Report to the NRC?*

A licensee would be required to report any actual or attempted theft, sabotage, or diversion of a category 1 or category 2 quantity of radioactive material as soon as possible after initiating a response, which includes notification of the LLEA. The licensee would be required to submit a written report to the NRC within 30 days after the initial notification.

## 20. *How Would a Licensee Determine the Effectiveness of the Security Program?*

Licensees would be required to review the security program every 12 months to confirm compliance with the requirements. The review would evaluate the security program content and implementation. The licensee would be required to document any review findings and corrective actions and the records would need to be maintained for 5 years.

### D. Transportation Security

#### 1. *What Is the NRC Authority to Issue These Transportation Security Requirements?*

Sections 53, 81, and 161 of the AEA, as amended, provide the NRC with the statutory authority to issue these transportation security requirements. The NRC shares overlapping jurisdiction over the transport of radioactive material over public roadways and by rail with DOT and the Department of Homeland Security.

#### 2. *Why Is This Material Being Shipped?*

In general, category 1 and category 2 quantities of radioactive material are shipped to medical institutions, companies that support medical and academic institutions, and companies that manufacture and distribute radioactive material for various industrial applications. As radioactive sources get older, radioactive decay decreases the sources' strength and the sources lose their effectiveness and have to be replaced or replenished with new sources. The older sources must be transported for disposal or back to the manufacturer.

In addition, commercial power plants will occasionally transport large scale plant equipment that may contain radioactive material (e.g., steam generators and reactor vessels) for disposal.

#### 3. *What are the New Transportation Security Requirements?*

In general, the proposed rule includes requirements for pretransfer checks, preplanning and coordination of shipments, advance notification of shipments, control, monitoring, and

communications during shipments, procedures and training, investigations of missing shipments, and reporting of missing material. Each of these areas is discussed in more detail in the following questions and answers.

These requirements would apply to ground transport of category 1 or category 2 quantities of radioactive material shipped in a single package or in multiple packages in a single conveyance. Per proposed § 73.35, the category 1 requirements would also apply to shipments of irradiated reactor fuel weighing 100 grams or less in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, which has a total external radiation dose rate in excess of 1 Sv (100 rem) per hour at a distance of 0.91 m (3 ft) from any accessible surface without intervening shielding. Note that a licensee is not responsible for complying with these requirements when a carrier aggregates radioactive material, during transport or storage incidental to transport, for two or more conveyances from separate licensees that individually do not exceed the limits. As provided in proposed § 37.73(c), the shipping licensee would be responsible for meeting the requirements unless the receiving licensee agrees in writing to arrange for the in-transit physical protection. At the suggestion of commenters on the preliminary rule text, the proposed rule text was revised to clarify that the requirements would only apply to the domestic portion of the transportation for imports and exports.

#### *4. Is Verification of the Transferee's License Necessary?*

Yes, proposed § 37.71 would require any licensee transferring category 1 and category 2 quantities of radioactive material to a licensee of the NRC or an Agreement State to verify that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred. For transfers of category 1 quantities of radioactive material, the transferring licensee would also be required to verify that the licensee is authorized to receive

radioactive material at the address requested for delivery. These verifications would be conducted with the license issuing authority, i.e., the NRC or the appropriate Agreement State or by using the license verification system. The license verification system is a new web-based system that NRC is developing that may be used to verify the validity of a license issued by either NRC or an Agreement State. Although this system is in the early stages of development, it will be available before the effective date of the final rule. If the system is not available licensees would need to contact the appropriate licensing agency. Licensees should contact the appropriate NRC regional office to verify the validity of NRC licensees. Information on Agreement State contacts is provided on the NRC web page at <http://nrc.stp.ornl.gov/asdirectory.html>. Licensees exporting material would need to meet the requirements in 10 CFR part 110 for checking the documentation that the recipient has the necessary authorization under the laws and regulations of the importing country. These actions are intended to mitigate the risk that the material could be shipped to an unauthorized recipient.

The NRC is considering subjecting the transfers of category 2 quantities of radioactive material to the license address verification requirement. If category 2 transfers are made subject to the license address verification requirement, the transferring licensee would be required to verify with the license issuing authority that the transferee licensee is authorized to receive radioactive material at the address requested for delivery. We are specifically inviting public comment on several aspects of license and address verification. In developing comments on this aspect, consider the following:

(1) Should there be a requirement for verification of the license for transfers of category 2 quantities of radioactive material or would it be acceptable to wait for the system being developed before requiring license verification for transfers of category 2 quantities of radioactive material?

(2) We are interested in how address verification might work for shipments to temporary job sites and the ability of both licensees and the Agreement States to comply with such a requirement. For example, would States be able to accommodate such requests with their current record systems?

(3) We are also seeking comment on the frequency of the license verification. For example, should a licensee be required to check with the licensing agency for every transfer or would an annual check (or some other frequency) of the license be sufficient?

(4) If an annual check is allowed, how would the transferring licensee know if a license has been modified since the last check and that the licensee is still authorized to receive the material?

*5. Is Preplanning and Coordination of the Shipments Necessary?*

Yes, § 37.75(a) of the proposed rule would require preplanning and coordination of shipment information for shipments of category 1 quantities of radioactive material. The shipping licensee (licensee sending the licensed material) would be required to coordinate the departure and arrival times, including the no-later than arrival time, with the receiving licensee (licensee receiving the licensed material). This coordination would reduce the risk that theft or diversion of the material would go unnoticed or unreported. The licensee would also need to preplan and coordinate the shipment information with the State(s) through which the shipment will pass. As part of the coordination activities, the licensee would be required to discuss the State's intention to provide law enforcement escorts for the shipments, identify highway route control quantity shipments, identify safe havens, and arrange for any positional information sharing. The purpose of the information sharing is to ensure minimal delay of the shipment.

For shipments of category 2 quantities of radioactive material, § 37.75(b) of the proposed rule would require that the shipping licensee verify the shipment no-later-than arrival



time and the actual arrival time with the receiving licensee.

The definitions section of the proposed rule would define the term “no-later-than arrival time” as the date and time that the shipping licensee and receiving licensee have established as the time at which an investigation will be initiated if the shipment has not arrived at the receiving facility. The no-later-than-arrival time may not be more than 2 hours after the estimated arrival time for category 1 shipments and not more than 4 hours after the estimated arrival time for category 2 shipments. Verifying that the shipment arrives on time provides the licensee with the means to identify and immediately report an unusual occurrence that could lead to the theft or diversion of the material.

Commenters on the preliminary draft rule text suggested that a timeframe be added to the definition and suggested 24 hours as the appropriate timeframe. The NRC agrees that the definition would be strengthened by adding a timeframe; however, the NRC believes that 2 hours for category 1 shipments and 4 hours for category 2 shipments are the appropriate timeframes. The NRC believes that 24 hours is too long before starting an investigation. The sooner an investigation is started, the better chance there is of recovering the material.

#### *6. What does the NRC Consider to be a Safe Haven?*

A definition for the term “safe haven” has been added to the definitions section of the proposed rule text at the request of commenters on the preliminary rule text. A safe haven would be defined as “[a] readily recognizable and readily accessible site at which security is present or from which, in the event of an emergency, the transport crew can notify and wait for the local law enforcement authorities.” The NRC expects safe havens to be identified and designated by the licensee.

Licensees should use the following criteria in identifying safe havens for shipments: close proximity to the route, i.e., readily available to the transport vehicle; security from local, State, or Federal assets is present or is accessible for timely response; the site is well lit, has

adequate parking, and can be used for emergency repair or to wait for LLEA response on a 24-hour a day basis; and additional telephone facilities are available should the communications system of the transport vehicle not function properly. Possible safe haven sites include: Federal sites having significant security assets; secure company terminals; State weigh stations; truck stops with secure areas; and LLEA sites, including State police barracks.

In addition, in response to comments on the preliminary rule text, the NRC revised the proposed § 37.75(a)(2) to clarify that the preplanning and coordination of all category 1 shipments with the governor of each state that the shipment will pass through will require the identification of safe havens.

*7. Is the Shipping Licensee Required to Notify the Receiving Licensee if the No-Later-Than Arrival Time Changes?*

Yes. If the no-later-than arrival time will not be met, then under § 37.75(d) of the proposed rule, the shipping licensee must inform the receiving licensee of the new no-later-than arrival time for shipments of category 1 or category 2 quantities of radioactive material. This provision allows licensees the ability to modify departure and arrival time due to unforeseen events and was added at the suggestion of commenters on the preliminary rule text.

*8. Whom Would the Licensee Notify When the Shipment Arrives?*

Proposed § 37.75(c) would require that the receiving licensee notify the shipping licensee when the shipment of a category 1 or category 2 quantity of radioactive material arrives at its destination. The notification must be no later than 4 hours after the package arrives. A timeframe was added to the proposed rule at the suggestion of commenters on the preliminary rule text.

*9. What Does State Refer to in the Requirements?*

As used in the definitions section of the proposed rule, the term “State” means the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam,

American Samoa, and the Commonwealth of the Northern Mariana Islands. A list of the contact information for the governor's designees is published annually in the *Federal Register* most recently on July 14, 2009 (74 FR 34053). An updated list is posted on the NRC website at <http://nrc-stp.ornl.gov/special/designee.pdf>. Copies may also be obtained by contacting the Director, Division of Intergovernmental Liaison and Rulemaking, Office of Federal and State Materials and Environmental Management Programs, Nuclear Regulatory Commission. If the final rule is approved, the NRC will work with the States to include a separate column for contacts for 10 CFR part 37.

10. *What Advance Notifications Would Be Required?*

Proposed § 37.77 would require advance written notifications for shipments containing category 1 quantities of radioactive material. The advance notifications would be made to the NRC and to any State through which a shipment was being transported. The State notification would be made to the governor or the governor's designee.

Advance notification provides States and the NRC with knowledge of shipments so that in the event there is an increase in the risk of theft or diversion of the material, the regulator could delay or reroute the shipment to minimize the risk. This advance notification also allows States with escort requirements to engage in planning to support the shipment.

Advance notifications would not be required for shipments of category 2 quantities of radioactive material, unless the shipment falls within the scope of 10 CFR 71.97(b).

11. *What Information Would Be Included In An Advance Notification?*

Proposed § 37.77(b) would require the following information be included in an advance notification for a category 1 shipment of radioactive material, if available at the time of notification: (1) the name, address, and telephone number of the shipper, carrier, and receiver of the shipment; (2) the license number of the shipper and receiver; (3) a description of the radioactive material contained in the shipment, including the radionuclides and quantity; (4) the

point of origin of the shipment and the estimated time and date that shipment will commence; (5) the estimated time and date that the shipment is expected to enter each State along the route; (6) the estimated time and date of arrival of the shipment at the destination; and (7) the contact and telephone number for the point of contact. For the purpose of coordination only, the actual information in the advance notification would not be considered to be SGI-M. Any information that is not available at the time of the initial notification would be provided in a revised notification once the information becomes available.

*12. What Should A Licensee Do If The Shipment Schedule Is Revised Or The Shipment Cancelled?*

If the shipment schedule is revised or cancelled, §§ 37.77(c) and (d), respectively, of the proposed rule would require the shipping licensee to notify the appropriate States and the NRC. The preliminary rule text required that the licensee would telephone the governor's designees when it discovered that the schedule would not be met. In response to comments on the preliminary rule text, the NRC has modified the proposed rule text to require that the governor's designee be notified without specifying a specific means for the notification.

*13. What Should a Licensee Do If the Shipment Does Not Arrive by the No-Later-Than Arrival Time?*

Proposed § 37.79(d) would require a licensee that has shipped category 1 or category 2 quantities of radioactive material to initiate an investigation for any shipment that has not arrived at the receiving licensee's facility by the designated no-later-than arrival time. The no-later-than arrival time would be defined as the date and time that the shipping licensee and receiving licensee have established as the time at which an investigation will be initiated if the shipment has not arrived at the receiving facility. The no-later-than-arrival time may not be longer than 2 hours after the estimated arrival time for a shipment of category 1 quantities of radioactive material and 4 hours after the estimated arrival time for a shipment of category 2 quantities of

radioactive material. Commenters on the preliminary draft rule text suggested that a timeframe be added to the definition and suggested 24 hours as the appropriate timeframe. The NRC agrees that the definition would be strengthened by adding a timeframe; however, the NRC believes that 2 hours for category 1 shipments and 4 hours for category 2 shipments are the appropriate timeframes. The NRC believes that 24 hours is too long before starting an investigation. The sooner an investigation is started, the better chance there is of recovering the material.

*14. When Must a Licensee Make Notification That a Shipment Is Lost or Missing?*

When a licensee determines that a shipment of a category 1 quantity of radioactive material is lost or missing, § 37.81(a) of the proposed rule would require the licensee to notify the LLEA in the area of the shipment's last confirmed location within 1 hour and then to notify the NRC Operations Center. Notification to the NRC should be as prompt as possible, but not at the expense of causing delay or interference with the LLEA response to the event.

When a licensee determines that a shipment of category 2 quantities of radioactive material is lost or missing, § 37.81(b) of the proposed rule would require the licensee to notify the NRC Operations Center within 4 hours of such determination. The licensee would also be required to immediately notify the NRC Operations Center if, after 24 hours from its determination that the shipment was lost or missing, the location of the material still cannot be determined.

Early notification provides for a more timely response from law enforcement, thereby reducing the risk of the misuse of the material.

*15. Should Licensees Make Notification That a Lost or Missing Shipment has been Found?*

Yes, proposed §§ 37.81(e) and (f), for category 1 shipments and category 2 shipments respectively, require the licensee to notify the NRC Operations Center when a lost or missing shipment has been located. This notification would be considered an update on the initial

notification. Without this notification, regulatory authorities and LLEA would waste resources continuing any search for the material.

*16. What Would a Licensee be Required to Do If There Is an Attempt to Steal or Divert a Shipment?*

For shipments of category 1 quantities of radioactive material, proposed § 37.81(c) would require a licensee who discovers an actual or attempted theft or diversion of a shipment, or any suspicious activity related to a shipment, to notify the designated LLEA along the shipment route as soon as possible. After notifying the LLEA, the licensee would be required to notify the NRC Operations Center. The NRC Operations Center would notify other affected States and the agency's Federal partners. For shipments of category 2 quantities of radioactive material, proposed § 37.81(d) would require a licensee who discovers an actual or attempted theft or diversion of a shipment, or any suspicious activity related to a shipment, to notify the NRC Operations Center as soon as possible. These security measures enhance the likelihood that the material will be successfully protected or recovered and allows for early warning of other possible victims of a simultaneous attempt to divert material from multiple locations.

*17. What Types Of Procedures And Training Are Necessary For Shipping Category 1 Quantities of Radioactive Material?*

Proposed § 37.79(c)(1) would require licensees shipping category 1 quantities of radioactive material to ensure that normal and contingency procedures are developed to cover notifications; communication protocols; loss of communication; and response to an actual or attempted theft or diversion of a shipment, or any suspicious activity related to a shipment. The licensee would be required to ensure that drivers, accompanying personnel, railroad personnel, and movement control center personnel are appropriately trained in the normal and contingency procedures. Procedures and training provide reasonable assurance that these individuals are

prepared for most situations and are able to act without delay to prevent the theft or diversion of shipments.

18. *What Would Be Included In The Communication Protocols?*

Proposed § 37.79(c)(1)(ii) would require that the communication protocols include a strategy for the use of authentication and duress codes and provisions for refueling or other stops, detours, and locations where communication is expected to be temporarily lost.

19. *What Are the Physical Protection Requirements for Road Shipments of Category 1 Quantities of Radioactive Material?*

Proposed § 37.79(a)(1)(i) would require that any licensee that ships category 1 quantities of radioactive material by road either establish or use a carrier that has established, movement control centers that maintain position information from a location remote from the activity of the transport vehicle or trailer. The control centers would be required to monitor shipments on a continuous and active monitoring basis (24 hours a day, 7 days a week), and have the ability to communicate immediately, in an emergency, with the appropriate law enforcement agencies.

Proposed § 37.79(a)(1)(ii) would require that the licensee ensure that redundant communications are in place that would allow the transport to contact an escort vehicle (if used) and the movement control center at all times. The redundant communication must not be subject to the same interference factors as the primary communication method. The same interference factors mean any two systems that rely on the same hardware or software to transmit their signal (e.g., cell tower or proprietary network).

Redundant communications provide drivers with the means to immediately report an unusual occurrence that could lead to the theft or diversion of the material. Early notification would permit a more timely response from law enforcement, thereby reducing the risk of the misuse of the material.

Proposed § 37.79(a)(1)(iii) would require that the licensee ensure that the shipments are continuously and actively monitored by a telemetric position monitoring system or an alternative tracking system reporting to a movement control center. The movement control center would be required to provide positive confirmation of the location, status, and control over the shipment and be prepared to implement preplanned procedures in response to deviations from the authorized route or to a notification of actual or attempted theft or diversion or suspicious activities related to the theft, loss, or diversion of a shipment. These procedures would include the identification of, and contact information for, the appropriate LLEA along the shipment route.

A telemetric position monitoring system is a data transfer system that captures information by instrumentation and/or measuring devices about the location and status of a transport vehicle or package between the departure and destination locations. The gathering of this information permits remote monitoring and reporting of the location of a transport vehicle or package. GPS and radiofrequency identification (RFID) are examples of telemetric position monitoring systems.

If the driving time period is greater than the maximum number of allowable hours of service in a 24-hour duty day as established by the DOT Federal Motor Carrier Safety Administration, proposed § 37.79(a)(1)(iv) would require that the licensee ensure that an accompanying individual is provided for the entire shipment. The accompanying individual may be another driver. This security measure provides reasonable assurance that the material will be protected from theft or diversion when it is stationary, as well as in emergency situations where it becomes necessary for the driver to stop or leave the vehicle.

#### 20. *Would GPS Be Required?*

No, GPS would not be required. For category 1 material, the NRC is proposing to require continuous and active monitoring for shipments. Continuous and active monitoring



means that at any time while the shipment is enroute, the licensee must be knowledgeable of the shipment's whereabouts. Not specifying a particular technology provides licensees with flexibility to design a continuous and active monitoring system that meets their unique circumstances. However, GPS would be considered an acceptable method.

21. *What are the Physical Protection Requirements for Rail Shipments of Category 1 Quantities of Radioactive Material?*

Proposed § 37.79(b)(1)(i) would require each licensee that ships category 1 quantities of radioactive material by rail to ensure that rail shipments are monitored by a telemetric position monitoring system or an alternative tracking system reporting to a licensee, third-party, or railroad communications center which meets certain criteria. The communications center would need to provide positive confirmation of the location of the shipment and its status. The communications center would also need to be prepared to implement preplanned procedures in response to deviations from the authorized route or to a notification of an actual or attempted theft or diversion of a shipment, or any suspicious activity related to a shipment. These procedures include the identification of, and contact information for, the appropriate LLEA along the shipment route. Rail shipment tracking provides the means for a communications center to immediately report an unusual occurrence that could lead to the theft or diversion of the material. Early notification provides for a more timely response from LLEAs, thereby reducing the risk of the misuse of the material.

Proposed § 37.79(b)(1)(ii) would require that the licensee have an NRC-approved monitoring plan to ensure that no unauthorized access to the shipment takes place while the shipment is in a railroad classification yard. The NRC is specifically seeking comment on the feasibility of this requirement. In developing comments on this aspect, consider the following questions:

(1) How could surveillance of the shipment be accomplished while in the classification yard?

(2) Would the classification yard allow an individual to accompany a shipment while the shipment is held in the classification yard?

(3) What precautions might be necessary from a personal safety standpoint?

*22. What are the Physical Protection Requirements for Shipments of Category 2 Quantities of Radioactive Material?*

Proposed § 37.79(a)(2) would require that a licensee shipping category 2 quantities of radioactive material by road maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance. Proposed § 37.79(a)(3) (for category 2 road shipments) and proposed § 37.79(b)(2) (for category 2 rail shipments), in the case of the licensee using a common carrier, would require that licensees use a carrier that has an established package tracking system. An established package tracking system means a documented, proven, and reliable system routinely used to transport objects of value. The package tracking system must allow the shipper or transporter to identify when and where the package was last and when it should arrive at the next point of control. The licensee would be required to use a carrier that maintains constant control and surveillance during transit and has the capability for immediate communication to summon appropriate response or assistance. The carrier must also require an authorized signature prior to releasing the package for delivery or return.

In general, the licensee must be able to contact the shipping carrier and determine the approximate location of the shipment. Package tracking systems, such as common overnight delivery service with standard tracking would be acceptable. These requirements mitigate with reasonable assurance the risk of loss, theft or diversion of the material.

*23. How Long Do Records Related To A Shipment Need To Be Maintained?*

Proposed § 37.71 would require licensees to retain records documenting the verification for license authorization for category 1 quantities of radioactive material transfers for 5 years. Proposed § 37.75(e) would require that licensees retain records related to preplanning and coordination for 5 years. Proposed § 37.77(e) would require that licensees retain records related to the advance notification for shipments of category 1 quantities of radioactive material for 5 years. The requirement for documentation and record retention related to the preplanning and coordination of shipments was added at the suggestion of commenters on the preliminary rule language.

*24. How is the Public Protected from Loss, Theft, or Diversion of These Shipments?*

Regulating transport of radioactive material is a joint responsibility of the NRC and DOT. The quantities of radioactive materials being considered as part of this rulemaking, in general, are transported in packages (casks) that meet rigorous NRC safety standards. The packages are referred to as “Type B” packages in both NRC and DOT regulations. The NRC fact sheet on transportation of radioactive materials can be found at <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/transport-spenfuel-radiomats-bg.html>.

The carrier transporting radioactive material must also meet the DOT’s requirements for shipment of the radioactive material. A link to the DOT’s website is provided on the NRC’s website at <http://www.nrc.gov/materials/transportation.html>.

*25. What are the Requirements for Small Quantities or Irradiated Reactor Fuel?*

The proposed rule would add a new § 73.35 to Part 73, which would provide that the requirements for shipments of irradiated reactor fuel weighing 100 g (0.22 lb) or less in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, which has a total external radiation dose rate in excess of 1 Sv (100 rem) per hour at a distance of 0.91 m (3 ft) from any accessible surface without intervening shielding, would be the same as the requirements for shipments of category 1 quantities of radioactive material.

## 26. *What Doesn't This Proposed Rule Cover?*

The proposed rule does not address air or water transport. Transport of radioactive material within airports and by air is regulated by the Federal Aviation Administration. Transport of radioactive material within ports and by waterway is regulated by the U.S. Coast Guard.

The proposed rule also does not address transshipments of category 1 or category 2 quantities of radioactive material through the United States. Transshipments are shipments that are originated by a foreign company in one country, pass through the United States, and then continue on to a company in another country. Transshipments are regulated by the DOT and DHS.

Finally, this rulemaking does not address transport of spent fuel, except irradiated reactor fuel weighing 100 g (0.22 lb) or less in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, which has a total external radiation dose rate in excess of 1 Sv (100 rem) per hour at a distance of 3 ft from any accessible surface without intervening shielding.

### III. Discussion of Proposed Rule by Section

#### Section 30.6 Communications.

This section would be revised to include a reference to the new 10 CFR part 37.

#### Section 30.13 Carriers.

This section would be revised to include 10 CFR part 37 in the list of regulations that exempt common carriers.

#### Section 30.32 Application for specific licenses.

Paragraph (l) would be added to require that an application under 10 CFR part 30

include information concerning whether the applicant's proposed security program meets the requirements of 10 CFR part 37.

Section 30.33 General requirements for issuance of specific licenses.

Paragraph (a)(4) would be revised to include a reference to the new 10 CFR part 37.

Section 32.1 Purpose and scope.

10 CFR part 37 would be added to the list of 10 CFR parts that apply to applications and licenses subject to this part.

Section 33.1 Purpose and scope.

10 CFR Part 37 would be added to the list of 10 CFR parts that apply to applications and licenses subject to this part.

Section 34.1 Purpose and scope.

10 CFR Part 37 would be added to the list of 10 CFR parts that apply to applications and licenses subject to this part.

Section 35.1 Purpose and scope.

10 CFR Part 37 would be added to the list of 10 CFR parts that apply to applications and licenses subject to this part.

### Section 36.1 Purpose and scope.

10 CFR Part 37 would be added to the list of 10 CFR parts that apply to applications and licenses subject to this part.

### Section 37.1 Purpose.

This section would establish the purpose for the proposed new 10 CFR part 37.

### Section 37.3 Scope.

This section would establish the scope of the proposed new 10 CFR part 37. These regulations would apply to any person licensed by the NRC, who possesses, uses, or transports category 1 or category 2 quantities of radioactive material. Paragraph (a) would establish the applicability for subpart B. Paragraph (b) would establish the applicability for subpart C. Paragraph (c) would establish the applicability for subpart D.

### Section 37.5 Definitions.

Definitions of the following terms that would be included in this part are identical to the definition of the term in other parts of this chapter: Act, Agreement State, Becquerel, Byproduct material, Commission, Curie, Government agency, License, Lost or missing material, Person, State, and United States. In addition, definitions for the following terms are included in this part: Approved individuals, Access control, Aggregated, Background investigation, Category 1 quantity of radioactive material, Category 2 quantity of radioactive material, Diversion, Escorted access, Fingerprint Orders, Isolation, License issuing authority, Local law enforcement agency, Mobile device, Movement control center, No-later-than arrival time, Reviewing official, Sabotage, Safe haven, Security zone, Telemetric position monitoring system, Temporary job site, Trustworthiness and reliability, and Unescorted access.

Section 37.7 Communications.

This section would specify where all communications and reports concerning 10 CFR part 37 would be sent.

Section 37.9 Interpretations.

This section would establish that no interpretations of the meaning of the regulations in 10 CFR part 37 by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized as binding upon the Commission, unless specifically authorized by the Commission in writing.

Section 37.11 Specific exemptions.

This section would establish that the Commission may grant exemptions from the requirements of the regulations in 10 CFR part 37 that it determines are authorized by law and that will not endanger life or property or the common defense and security, and are otherwise in the public interest. Paragraph (b) would exempt a licensee's activities from 10 CFR part 37 to the extent that the activities are covered under the physical protection requirements of 10 CFR part 73.

Section 37.13 Information collection requirements: OMB approval.

Paragraph (a) would specify that the NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Paragraph (b) would list those sections in 10 CFR part 37 that have approved information collection requirements.

Section 37.21 Personnel access authorization requirements for category 1 or category 2 quantities of radioactive material.

Paragraph (a) of this section would establish which licensees would need to comply with the requirements of the proposed subpart B of 10 CFR part 37.

Paragraph (b) would establish the general performance objective to ensure that the individuals subject to the access authorization program are trustworthy and reliable.

Paragraph (c)(1) would establish the individuals that would be subject to the access authorization program. Paragraph (c)(2) would allow licensees to not subject those individuals listed in 10 CFR 37.29(a) through (l) to the investigation elements of the access authorization program. Paragraph (c)(3) would require that licensees only approve those individuals whose job duties permit unescorted access to category 1 or category 2 quantities of radioactive material.

Section 37.23 Access authorization program requirements.

This section would establish the general requirements for the access authorization program.

Section 37.25 Background investigations.

This section would establish the elements of the background investigation that is necessary before granting an individual unescorted access to category 1 or category 2 quantities of radioactive material. The scope of the initial investigation would be the past 10 years.

Section 37.27 Requirements for criminal history records checks of individuals granted unescorted access to category 1 or category 2 quantities of radioactive material.



Paragraph (a) would establish the general requirements for criminal history records checks of individuals to be granted unescorted access to category 1 or category 2 quantities of radioactive material.

Paragraph (b) would prohibit a licensee from basing a final determination to deny an individual unescorted access authorization solely on the basis of certain information received from the FBI.

Paragraph (c) would establish the procedure for submitting fingerprint records to the NRC.

Section 37.29 Relief from fingerprinting, identification, and criminal history records checks and other elements of background investigations for designated categories of individuals permitted unescorted access to certain radioactive materials or other property.

This section would provide relief from the fingerprinting and criminal history records check requirements and the background investigation requirements of this subpart for the certain categories of individuals.

Section 37.31 Protection of information.

This section would outline the proposed requirements for the protection and release to authorized personnel of personal information collected by a licensee during a background investigation.

Section 37.33 Access authorization program review.

This section would outline the requirements for an annual access authorization program review to confirm compliance with the requirements of subpart B of 10 CFR part 37 and for comprehensive corrective actions to be taken in response to any nonconformance identified by the review.

#### Section 37.41 Security program.

Paragraph (a) would establish the applicability of the security program. Paragraph (a)(1) would require licensees that possess an aggregated quantity of category 1 or category 2 quantities of radioactive material to develop, establish, and implement, and maintain a security program. Paragraph (a)(2) would require those licensees that are authorized to possess but don't actually possess an aggregated quantity to develop a security program. Paragraph (a)(2) would also require a licensee to implement the security program at least 90 days before aggregating radioactive material to the category 2 threshold and to notify the NRC of the implementation.

Paragraph (b) would establish the general performance objective of the security program.

Paragraph (c) would establish the program features that must be addressed in the security program.

Paragraph (d) would require licensees that possess a category 1 or category 2 quantity of radioactive material to submit information concerning the licensee's compliance with the security program requirements within 30 days of the final rule's effective date.

#### Section 37.43 General security program requirements.

Paragraph (a)(1) would require licensees to develop a written security plan that addresses how the licensee will implement the security program requirements. Paragraph (a)(2) would require the security plan to be reviewed and approved by the individual with overall responsibility for the security program. Paragraph (a)(3) would allow a licensee to revise its security plan to ensure effective implementation of the plan. Paragraph (a)(4) would require the licensee to retain a copy of the current security plan until the license is terminated and any security plan revisions for 5 years.

Paragraph (b)(1) would require licensees to develop and maintain written procedures for implementation of the security plan. Paragraph (b)(2) would require the procedures to be approved by the individual with overall responsibility for the security program. Paragraph (b)(3) would require the licensee to retain a copy of the procedures until the license is terminated and any revisions for 5 years.

Paragraph (c) would require licensees to conduct training and annual refresher training on the security plan. Licensees would be required to maintain training records for 5 years from the date of the training.

Paragraph (d) would require licensees to protect the security plan and implementing procedures from unauthorized disclosure. Licensees would be required to develop, maintain and implement written policies and procedures for controlling access to, and for proper handling and protection against unauthorized disclosure of, the security plan and implementing procedures. Only individuals with a need-to-know and that have been determined to be trustworthy and reliable would be able to have access to the protected information. The information protection procedures would be retained for 5 years after the document is no longer needed.

#### Section 37.45 LLEA coordination and notification.

Paragraph (a) would require that a licensee attempt to coordinate with an LLEA and would specify the types of information to be shared with the LLEA.

Paragraph (b) would establish when the licensee must notify the LLEA about planned work at a temporary job site and the information to be shared in the notification.

Paragraph (c) would require the licensee to maintain records of its coordination activities with any LLEA.

#### Section 37.47 Security zones.

Paragraph (a) would require licensees to establish security zones for the use of category 1 or category 2 quantities of radioactive material.

Paragraph (b) would require the establishment of temporary security zones, as necessary, to meet transitory or intermittent business activities.

Paragraph (c) would require that security zones use physical barriers or direct control of the security zone to allow unescorted access only to approved individuals.

Paragraph (d) would require licensees to provide an approved individual to maintain constant surveillance of sources in temporary security zones or in a security zone in which a physical barrier or intrusion detection system has been disabled to allow maintenance, source receipt, preparation for shipment, source installation, or removal or exchange of category 1 quantities of radioactive material.

#### Section 37.49 Monitoring, detection, and assessment.

Paragraph (a) would require the licensee to establish and maintain the capability to continuously monitor and detect without delay all unauthorized entries into the security zones.

Paragraph (b) would require the licensee to assess without delay each actual or attempted unauthorized entry into the security zone.

Paragraph (c)(1) would require the licensee to maintain continuous capability for personnel communication and electronic data transmission and processing among site security systems. Paragraph (c)(2) would require the licensee to provide alternative capabilities for personnel communication and data transmission and processing.

Paragraph (d) would require the licensee to respond without delay to any actual or attempted unauthorized access to the security zone.

Section 37.51 Maintenance, testing, and calibration.

This section would require licensees to implement a maintenance, testing, and calibration program to ensure that intrusion alarms, associated communication systems, and other physical components of the systems used to secure and detect unauthorized access to radioactive material are maintained in operable condition, are capable of performing their intended function when needed, and are inspected and tested for operability and performance every 3 months. Licensees would be required to maintain the maintenance, testing, and calibration records for 5 years.

Section 37.53 Requirements for mobile devices.

This section would require licensees that possess mobile devices containing category 1 or category 2 quantities of radioactive materials to have two independent physical controls to secure the radioactive material from unauthorized removal and to use a method to disable the vehicle or trailer when the device is on a vehicle or trailer.

Section 37.55 Security program review.

This section would require licensees to conduct a review of the security program every 12 months. The licensee would be required to document the results of the review and any findings and keep the records for 5 years.

Section 37.57 Reporting of events.

Paragraph (a) would require licensees to immediately notify the LLEA of any actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material and to then notify the NRC.

Paragraph (b) would require licensees to submit a written report to the NRC within

30 days of any report of actual or attempted theft, sabotage, or diversion of radioactive material.

Section 37.71 Additional requirements for transfer of category 1 and category 2 quantities of radioactive material.

This section would establish new requirements for licensees transferring category 1 and category 2 quantities of radioactive material.

Section 37.73 Applicability of physical protection of category 1 and category 2 quantities of radioactive material during transit.

This section would establish which requirements apply to licensees shipping category 1 or category 2 quantities of radioactive material and what requirements apply during the domestic portion of a shipment that is imported from another country. This section would also allow the receiving licensee to arrange for the in-transit physical protection of a shipment instead of the shipping licensee as long as the agreement is in writing.

Section 37.75 Preplanning and coordination of shipment of category 1 or category 2 quantities of radioactive material.

This section would establish the preplanning and coordination necessary for a shipment of category 1 or category 2 quantities of radioactive material.

Section 37.77 Advance notification of shipment of category 1 quantities of radioactive material.

This section would establish the requirements for advance notification to the NRC and the governor of a State, or the governor's designee, of the shipment of category 1 quantities of radioactive material that will pass through or across the State.

Section 37.79 Requirements for physical protection of category 1 and category 2 quantities of radioactive material during shipment.

This section would establish the physical protection requirements for shipments of category 1 and category 2 quantities of radioactive material. Paragraph (a)(1) would establish the requirements for shipping a category 1 quantity of radioactive material by road. Paragraph (a)(2) would establish the requirements for a licensee that transports category 2 quantities of radioactive material by road. Paragraph (a)(3) would establish the requirements for a licensee that uses a carrier for shipping category 2 quantities of radioactive material.

Paragraph (b)(1) would establish the requirements for shipping category 1 quantities of radioactive material by rail. Paragraph (b)(2) would establish the security requirements for shipping category 2 quantities of radioactive material by rail.

Paragraph (c)(1) would require licensees who make arrangements for the shipment of category 1 quantities of radioactive material to develop written normal and contingency procedures to address notifications, communication protocols, loss of communication, and response to actual or attempted theft or diversion of a shipment, or any suspicious activity related to a shipment. Paragraph (c)(2) would require licensees to ensure that drivers, accompanying personnel, train crew, and movement control center personnel are trained in and understand both the normal and contingency procedures.

Paragraph (d) would require the shipping licensee to immediately conduct an investigation of any shipment of category 1 or category 2 quantities of radioactive material that is lost or unaccounted for after the designated no-later-than arrival time in the advance notification.

Section 37.81 Reporting of events.

This section would establish requirements for the shipping licensee to make notifications

upon the discovery that a shipment is lost or missing and upon discovery of any actual or attempted theft or diversion of a shipment, or suspicious activities related to the theft or diversion of a shipment of either a category 1 or category 2 quantity of radioactive material. This section would also establish requirements for notification upon recovery of a lost or missing shipment. Written follow-up reports would be required for all notifications.

#### Section 37.101 Form of records.

This section would establish the requirements for the storage and protection of records required by this part.

#### Section 37.103 Record retention.

This section would establish the Commission's termination of the license as the end point of the retention period for any record where a specific retention period is not specified.

#### Section 37.105 Inspections.

Paragraph (a) would require licensees to allow the Commission the opportunity to inspect the materials and facilities subject to 10 CFR part 37.

Paragraph (b) would require the licensee to make available for inspection any records subject to 10 CFR part 37.

#### Section 37.107 Violations.

Paragraph (a) of this section would establish that the Commission may obtain an injunction or other court order to prevent a violation of the AEA, Title II of the Energy Reorganization Act of 1974, as amended; or a regulation or order issued under those Acts.

Paragraph (b) of this section would establish the violations for which the Commission



may obtain a court order for the payment of a civil penalty imposed under section 234 of the AEA.

Section 37.109 Criminal penalties.

This section would establish the sections in 10 CFR part 37 that are issued under one or more of sections 161b, 161i, or 161o and are therefore subject to criminal sanctions for willful violations of, attempted violation of, or conspiracy to violate the regulation.

Appendix A to 10 CFR Part 37 – Category 1 and Category 2 Radioactive Materials.

Table 1 of this appendix would establish the radionuclides and associated thresholds for category 1 and category 2 quantities of radioactive material. The appendix would also provide the methodology for calculating the sum of fractions for evaluating combinations of multiple radionuclides.

Section 39.1 Purpose and scope.

10 CFR Part 37 would be added to the list of 10 CFR parts that apply to applications and licenses subject to this part.

Section 51.22 Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review.

Paragraph (c)(3) would be revised to include 10 CFR part 37.

Section 71.97 Advance notification of shipment of irradiated reactor fuel and nuclear waste.

Paragraph (b) would be revised to delete the reference to shipments of irradiated reactor fuel in quantities less than that subject to the advance notification requirements of

§ 73.37(f). Proposed § 73.35 would provide that such irradiated reactor fuel shipments be subject to the same requirements that apply to shipments of category 1 radioactive material, including the advance notification requirements.

Section 73.35 Requirements for physical protection of irradiated reactor fuel (100 grams or less) in transit.

A new section would be added to 10 CFR Part 73 to address the physical protection requirements for shipments of irradiated reactor fuel weighing 100 g (0.22 lb) or less in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, which has a total external radiation dose rate in excess of 1 Sv (100 rem) per hour at a distance of 0.91 m (3 ft) from any accessible surface without intervening shielding. The material would be subject to the same transportation security requirements as category 1 quantities of radioactive material.

#### IV. Criminal Penalties

For the purpose of Section 223 of the AEA, the Commission is proposing to amend 10 CFR parts 30, 32, 33, 34, 35, 36, 39, 51, 71, and 73 and add new part 37 under one or more of Sections 161b, 161i, or 161o of the AEA. Willful violations of the rule would be subject to criminal enforcement.

#### V. Agreement State Compatibility

Under the “Policy Statement on Adequacy and Compatibility of Agreement State Programs” approved by the Commission on June 30, 1997, and published in the *Federal*

*Register* (62 FR 46517; September 3, 1997), this proposed rule would be a matter of compatibility between the NRC and the Agreement States, thereby providing consistency among the Agreement States and the NRC requirements. The NRC staff analyzed the proposed rule in accordance with the procedure established within Part III, "Categorization Process for NRC Program Elements," of Handbook 5.9 to Management Directive 5.9, "Adequacy and Compatibility of Agreement State Programs" (a copy of which may be viewed at <http://www.nrc.gov/reading-rm/doc-collections/management-directives/>).

The NRC program elements (including regulations) are placed into four compatibility categories (See the Draft Compatibility Table in this section). In addition, the NRC program elements can also be identified as having particular health and safety significance or as being reserved solely to the NRC. Compatibility Category A are those program elements that are basic radiation protection standards and scientific terms and definitions that are necessary to understand radiation protection concepts. An Agreement State should adopt Category A program elements in an essentially identical manner to provide uniformity in the regulation of agreement material on a nationwide basis. Compatibility Category B are those program elements that apply to activities that have direct and significant effects in multiple jurisdictions. An Agreement State should adopt Category B program elements in an essentially identical manner. Compatibility Category C are those program elements that do not meet the criteria of Category A or B, but the essential objectives of which an Agreement State should adopt to avoid conflict, duplication, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis. An Agreement State should adopt the essential objectives of the Category C program elements. Compatibility Category D are those program elements that do not meet any of the criteria of Category A, B, or C, above, and, thus, do not need to be adopted by Agreement States for purposes of compatibility.

Health and Safety (H&S) are program elements that are not required for compatibility, but are identified as having a particular health and safety role (i.e., adequacy) in the regulation of agreement material within the State. Although not required for compatibility, the State should adopt program elements in this H&S category based on those of the NRC that embody the essential objectives of the NRC program elements because of particular health and safety considerations. Compatibility Category NRC are those program elements that address areas of regulation that cannot be relinquished to Agreement States under the AEA or provisions of Title 10 of the Code of Federal Regulations. These program elements are not adopted by Agreement States. The following table lists the Parts and Sections that would be created or revised and their corresponding categorization under the "Policy Statement on Adequacy and Compatibility of Agreement State Programs." A bracket around a category means that the section may have been adopted elsewhere, and it is not necessary to adopt it again.

The NRC invites comment on the compatibility category designations in the proposed rule and suggests that commenters refer to Handbook 5.9 of Management Directive 5.9 for more information. The NRC notes that, like the rule text, the compatibility category designations can change between the proposed rule and final rule, based on comments received and Commission decisions regarding the final rule. The NRC encourages anyone interested in commenting on the compatibility category designations in any manner to do so during the comment period.

Draft Compatibility Table for Proposed Rule

Section	Change	Subject	Compatibility	
			Existing	New
Part 30				
30.6	Amend	Communications	D	D
30.13	Amend	Carriers	B	B
30.32(l)	New	Application of specific licenses	-	C

Section	Change	Subject	Compatibility	
			Existing	New
30.33(a)(4)	Amend	General requirements for issuance of specific licenses	D	D
Part 32				
32.1(b)	Amend	Purpose and scope	D	D
Part 33				
33.1	Amend	Purpose and scope	D	D
Part 34				
34.1	Amend	Purpose and scope	D	D
Part 35				
35.1	Amend	Purpose and scope	D	D
Part 36				
36.1	Amend	Purpose and scope	D	D
Part 37				
37.1	New	Purpose	-	D
37.3	New	Scope	-	D
37.5	New	Definition Access control	-	C
37.5	New	Definition Act	-	D
37.5	New	Definition Aggregated	-	C
37.5	New	Definition Agreement State	-	[B]
37.5	New	Definition Approved individual	-	B
37.5	New	Definition Background Investigation	-	C
37.5	New	Definition Becquerel	-	[A]
37.5	New	Definition Byproduct Material	-	[H&S]
37.5	New	Definition Category 1 quantities of radioactive material	-	B
37.5	New	Definition Category 2 quantities of radioactive material	-	B
37.5	New	Definition Commission	-	D
37.5	New	Definition Curie	-	[A]
37.5	New	Definition Diversion	-	C
37.5	New	Definition Escorted access	-	B
37.5	New	Definition Fingerprint Orders	-	C
37.5	New	Definition Government agency	-	D
37.5	New	Definition Isolation	-	C
37.5	New	Definition License	-	D
37.5	New	Definition License issuing agency	-	D
37.5	New	Definition Local law enforcement agency	-	C
37.5	New	Definition Lost or missing material	-	[B]
37.5	New	Definition Mobile device	-	B
37.5	New	Definition Movement control center	-	B
37.5	New	Definition No-later-than arrival time	-	B
37.5	New	Definition Person	-	[C]

Section	Change	Subject	Compatibility	
			Existing	New
37.5	New	Definition Reviewing official	-	C
37.5	New	Definition Sabotage	-	C
37.5	New	Definition Safe haven	-	B
37.5	New	Definition Security zone		C
37.5	New	Definition State	-	D
37.5	New	Definition Telemetric position monitoring system		B
37.5	New	Definition Temporary job site	-	B
37.5	New	Definition Trustworthiness and reliability	-	B
37.5	New	Definition Unescorted access	-	B
37.5	New	Definition United States	-	D
37.7	New	Communications	-	D
37.9	New	Interpretations	-	D
37.11(a)	New	Specific exemptions	-	D
37.11(b)	New	Specific exemptions	-	NRC
37.13	New	Information collection requirements: OMB approval	-	D
37.21(a)	New	General		C
37.21(b)	New	General performance objective	-	B
37.21(c)	New	Applicability	-	B
37.23(a)	New	Granting unescorted access authorization	-	B
37.23(b)	New	Reviewing officials	-	B
37.23(c)	New	Informed consent	-	B
37.23(d)	New	Personal history disclosure	-	B
37.23(e)	New	Determination basis	-	B
37.23(f)	New	Procedures	-	C
37.23(g)	New	Right to correct and complete information	-	B
37.23(h)	New	Records	-	C
37.25(a)	New	Initial investigation	-	B
37.25(b)	New	Grandfathering		C
37.25(c)	New	Reinvestigations	-	B
37.27(a)	New	General performance objective and requirements	-	B
37.27(b)	New	Prohibitions	-	B
37.27(c)	New	Procedures for processing fingerprint checks	-	B

Section	Change	Subject	Compatibility	
			Existing	New
37.29	New	Relief from fingerprinting, identification, and criminal history records checks and other elements of a background investigations for designated categories of individuals permitted unescorted access to certain radioactive materials or other property	-	B
37.31(a)-(d)	New	Protection of information	-	B
37.31(e)	New	Protection of information		C
37.33(a), (b), (c)	New	Access authorization program review	-	C
37.41(a)	New	Applicability	-	B
37.41(b)	New	General performance objective	-	B
37.41(c)	New	Program features	-	C
37.41(d)	New	Information submittal and notification	-	C
37.43(a)	New	Security plan	-	B
37.43(b)	New	Implementing procedures	-	C
37.43(c)(1) – (c)(3)	New	Training	-	B
37.43(c)(4)	New	Training		C
37.43(d)(1) – (d)(7)	New	Protection of Information	-	C
37.43(d)(8)	New	Protection of Information		NRC
37.45(a)	New	LLEA coordination	-	B
37.45b)	New	LLEA notification for temporary job sites	-	B
37.45(c)	New	Records	-	C
37.47(a)-(d)	New	Security Zones	-	B
37.49(a)	New	Monitoring and detection	-	B
37.49(b)	New	Assessment	-	B
37.49(c)	New	Personnel communications and data transmission	-	B
37.49(d)	New	Response	-	B
37.51	New	Maintenance, testing, and calibration	-	C
37.53	New	Requirements for mobile devices	-	B
37.55(a), (b), (c)	New	Security program review	-	C
37.57(a)	New	Reporting of events	-	C
37.57(b)	New	Reporting of events		C

Section	Change	Subject	Compatibility	
			Existing	New
37.71(a), (b)	New	Additional requirements for transfer of category 1 and category 2 quantities of radioactive material	-	B
37.71(c)	New	Additional requirements for transfer of category 1 and category 2 quantities of radioactive material	-	C
37.73(a), (b), (d), (e)	New	Applicability of physical protection of category 1 and category 2 quantities of radioactive material during transit	-	D
37.73(c)	New	Applicability of physical protection of category 1 and category 2 quantities of radioactive material during transit	-	B
37.75(a) – (d)	New	Preplanning and coordination of shipment of category 1 or category 2 quantities of radioactive material	-	B
37.75(e)	New	Preplanning and coordination of shipment of category 1 or category 2 quantities of radioactive material	-	C
37.77	New	Advance notification for shipments of category 1 quantities of radioactive material	-	B
37.77(a)	New	Procedures for submitting advance notification	-	B
37.77(b)	New	Information to be furnished in advance notification of shipment	-	B
37.77(c)	New	Revision notice	-	B
37.77(d)	New	Cancellation notice	-	B
37.77(e)	New	Records	-	C
37.77(f)	New	Protection of information	-	NRC
37.79(a)	New	Shipments by road	-	B
37.79(b)	New	Shipments by rail	-	B
37.79(c)	New	Procedures	-	B
37.79(d)	New	Investigations	-	B
37.81(a)	New	Reporting of events	-	B
37.81(b)	New	Reporting of events	-	B
37.81(c)	New	Reporting of events	-	B
37.81(d)	New	Reporting of events	-	B
37.81(e)	New	Reporting of events	-	B
37.81(f)	New	Reporting of events	-	B
37.81(g)	New	Reporting of events	-	C
37.81(h)	New	Reporting of events	-	C
37.101	New	Form of records	-	C
37.103	New	Record retention	-	C



Section	Change	Subject	Compatibility	
			Existing	New
37.105	New	Inspections	-	D
37.107	New	Violations	-	D
37.109	New	Criminal penalties	-	D
Appendix A	New	Category 1 and 2 thresholds	-	B
Part 39				
39.1	Amend	Purpose and scope	D	D
Part 51				
51.22(c)(3)	Amend	Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review	NRC	NRC
Part 71				
71.97(b)	Amend	Advance notification of shipment of irradiated reactor fuel and nuclear waste	B	B
Part 73				
73.35	New	Requirements for physical protection of irradiated reactor fuel (100 grams or less) in transit	-	NRC

## VI. Plain Language

The Presidential Memorandum, “Plain Language in Government Writing” published June 10, 1998 (63 FR 31883), directed that the Government’s documents be in clear and accessible language. The NRC requests comments on this proposed rule specifically with respect to the clarity and effectiveness of the language used. Comments should be sent to the address listed under the **ADDRESSES** heading.

## VII. Voluntary Consensus Standards

The National Technology Transfer and Advancement Act of 1995 (Pub. L. 104-113) requires that Federal agencies use technical standards that are developed or adopted by voluntary consensus standards bodies unless the use of such a standard is inconsistent with applicable law or otherwise impractical. In this proposed rule, the NRC would establish security requirements for the use of category 1 and category 2 quantities of radioactive materials. The NRC is not aware of any voluntary consensus standards that address the proposed subject matter of this proposed rule. The NRC will consider using a voluntary consensus standard if an appropriate standard is identified. If a voluntary consensus standard is identified for consideration, the submittal should explain why the standard should be used.

## VIII. Finding of No Significant Environmental Impact: Availability

Under the National Environmental Policy Act of 1969, as amended, and the NRC regulations in subpart A of 10 CFR part 51, the NRC has determined that this proposed rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment, and therefore an environmental impact statement is not required for this rulemaking. The NRC has prepared an environmental assessment and, on the basis of this environmental assessment, has made a finding of no significant impact.

The implementation of the proposed rule's security requirements would not result in significant changes to the licensee's facilities, nor would such implementation result in any significant increase in effluents released to the environment. Similarly the implementation of the proposed rule's security requirements would not affect occupational exposure requirements. No major construction or other earth disturbing activities, on the part of the affected licensees,

is anticipated in connection with licensee's implementation of the proposed rule's requirements. The Commission has determined that the implementation of this proposed rule would be procedural and administrative in nature.

The determination of this environmental assessment is that there will be no significant impact to the public from this action. However, the general public should note that the NRC welcomes public participation. Comments on any aspect of the Environmental Assessment may be submitted to the NRC as indicated under the **ADDRESSES** heading in this document.

The NRC has sent a copy of the Environmental Assessment and this proposed rule to every State Liaison Officer and requested their comments on the Environmental Assessment. The Environmental Assessment may be examined at the NRC Public Document, Room O-1F23, 11555 Rockville Pike, Rockville, MD 20852. The Environmental Assessment may also be viewed and downloaded electronically via the Federal eRulemaking Portal at <http://www.regulations.gov> by searching for Docket Number ID NRC-2008-0120.

#### IX. Paperwork Reduction Act Statement

This proposed rule contains new or amended information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq). This rule has been submitted to the Office of Management and Budget (OMB) for review and approval of the information collection requirements.

*Type of submission, new or revision:* new

*The title of the information collection:* "10 CFR Parts 30, 32, 33, 34, 35, 36, 37, 39, 51, 71, and 73, Physical Protection of Byproduct Material"

*The form number if applicable:* NA

*How often the collection is required:* One time for initial compliance notifications and fingerprints for the reviewing officials; and as needed for implementation notifications, event notifications, notifications of shipments of radioactive material, and fingerprinting of new employees.

*Who will be required or asked to report:* Licensees that are authorized to possess and use category 1 or category 2 quantities of radioactive material.

*An estimate of the number of annual responses:* 83,666 (88,066 responses plus 1,400 record keepers).

*The estimated number of annual respondents:* 1,917 (2,950 the first year, 1,400 in subsequent years)

*An estimate of the total number of hours needed annually to complete the requirement or request:* 63,446(5,125 one-time reporting hours, annualized to 1,708 hours plus 12,387 reporting hours plus 21,694 recordkeeping hours plus 27,657 third party hours).

*Abstract:* The NRC is proposing to amend its regulations to put in place security requirements for the use of category 1 and category 2 quantities of radioactive material. Licensees would be required to: (1) develop procedures for implementation of the security provisions; (2) develop a security plan that describes how security is being implemented; (3) conduct training on the procedures and security plan; (4) conduct background investigations

for those individuals permitted access to category 1 or category 2 quantities of radioactive material; (5) coordinate with LLEAs so the LLEAs would be better prepared to respond in an emergency; (6) conduct preplanning and coordination activities before shipping radioactive material; and (7) implement security measures for the protection of the radioactive material. Licensees would be required to promptly report any attempted or actual theft or diversion of the radioactive material. Licensees would be required to keep copies of the security plan, procedures, background investigation records, training records, and documentation that certain activities have occurred.

The NRC is seeking public comment on the potential impact of the information collections contained in this proposed rule and on the following issues:

1. Is the proposed information collection necessary for the proper performance of the functions of the NRC, including whether the information will have practical utility?
2. Is the estimate of burden accurate?
3. Is there a way to enhance the quality, utility, and clarity of the information to be collected?
4. How can the burden of the information collection be minimized, including the use of automated collection techniques?

A copy of the OMB clearance package may be viewed free of charge at the NRC Public Document Room, One White Flint North, 11555 Rockville Pike, Room O-1F21, Rockville, MD 20852. The OMB clearance package and rule are available at the NRC worldwide Web site <http://www.nrc.gov/public-involve/doc-comment/omb/index.html> for 60 days after the signature date of this notice.

Send comments on any aspect of these proposed regulations related to information collections, including suggestions for reducing the burden and on the above issues, by

**(INSERT DATE 30 DAYS AFTER PUBLICATION IN THE *FEDERAL REGISTER*)** to the Records and FOIA/Privacy Services Branch (T-5F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail to [Infocollects.Resource@NRC.gov](mailto:Infocollects.Resource@NRC.gov) and to the Christine Kymm (202-395-4638, [ckymn@omb.eop.gov](mailto:ckymn@omb.eop.gov)), Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-xxxx), Office of Management and Budget, Washington, DC 20503. Comments on the proposed information collections may also be submitted via the Federal eRulemaking Portal <http://www.regulations.gov>, Docket Number ID NRC-2008-0120. Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after this date.

#### Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

#### X. Regulatory Analysis

The Commission has prepared a draft regulatory analysis on this proposed regulation. The analysis examines the costs and benefits of the alternatives considered by the Commission.

The Commission requests public comment on the draft regulatory analysis. Comments on the draft analysis may be submitted to the NRC as indicated under the **ADDRESSES** heading. The analysis is available for inspection in the NRC Public Document Room,

11555 Rockville Pike, Rockville, MD 20852. The analysis may also be viewed and downloaded electronically via the Federal eRulemaking Portal at <http://www.regulations.gov> by searching for Docket Number NRC-2008-0120.

## XI. Regulatory Flexibility Certification

The NRC has prepared an initial regulatory analysis of the impact of this proposed rule on small entities. The proposed rule would affect about 300 NRC licensees and an additional 1,100 Agreement State licensees. Affected licensees include laboratories, reactors, universities, colleges, medical clinics, hospitals, irradiators, well loggers, and radiographers, some of which may qualify as small business entities as defined by 10 CFR 2.810. Based on the draft regulatory analysis conducted for this action, the costs of the proposed rule for affected licensees are estimated to be between \$541 million and \$743 million (7-percent and 3-percent discount rate, respectively) total. The average licensee would have a one-time cost of approximately \$27,000 and an annual cost of approximately \$25,700 to fully implement the proposed rule. An additional 1,550 licensees would experience a one-time cost of about \$3500 to develop a security program but would not need to implement the program. The NRC believes that the selected alternative reflected in the proposed rule is the least burdensome, most flexible alternative that would accomplish the NRC's regulatory objective. The draft Regulatory Flexibility Analysis is included as Appendix to this proposed rule.

The NRC is seeking public comment on the potential impact of the proposed rule on small entities. The NRC particularly desires comment from licensees who qualify as small businesses, specifically as to how the proposed regulation will affect them and how the regulation may be tiered or otherwise modified to impose less stringent requirements on small entities while still adequately protecting the public health and safety and common defense and

security. Comments on how the regulation could be modified to take into account the differing needs of small entities should specifically discuss—

(a) The size of the business and how the proposed regulation would result in a significant economic burden upon it as compared to a larger organization in the same business community;

(b) How the proposed regulation could be further modified to take into account the business's differing needs or capabilities;

(c) The benefits that would accrue, or the detriments that would be avoided, if the proposed regulation was modified as suggested by the commenter;

(d) How the proposed regulation, as modified, would more closely equalize the impact of NRC regulations as opposed to providing special advantages to any individuals or groups; and

(e) How the proposed regulation, as modified, would still adequately protect the public health and safety and common defense and security.

Comments should be submitted as indicated under the **ADDRESSES** heading.

## XII. Backfit Analysis

The NRC has determined that the backfit rule, which is found in the regulations at §§ 50.109, 70.76, 72.62, 76.76, and in 10 CFR Part 52, does not apply to this proposed rule because this amendment would not involve any provisions that would impose backfits as defined in 10 CFR chapter I. Therefore, a backfit analysis is not required.



## List of Subjects

### 10 CFR Part 30

Byproduct material, Criminal penalties, Government contracts, Intergovernmental relations, Isotopes, Nuclear materials, Radiation protection, Reporting and recordkeeping requirements.

### 10 CFR Part 32

Byproduct material, Criminal penalties, Labeling, Nuclear materials, Radiation protection, Reporting and recordkeeping requirements.

### 10 CFR Part 33

Byproduct material, Criminal penalties, Nuclear materials, Radiation protection, Reporting and recordkeeping requirements.

### 10 CFR Part 34

Criminal penalties, Packaging and containers, Radiation protection, Radiography, Reporting and recordkeeping requirements, Scientific equipment, Security measures.

### 10 CFR Part 35

Byproduct material, Criminal penalties, Drugs, Health facilities, Health professions, Medical devices, Nuclear materials, Occupational safety and health, Radiation protection, Reporting and recordkeeping requirements.

#### 10 CFR Part 36

Byproduct material, Criminal penalties, Nuclear materials, Reporting and recordkeeping requirements, Scientific equipment, Security measures.

#### 10 CFR Part 37

Byproduct material, Criminal penalties, Export, Hazardous materials transportation, Import, Licensed material, Nuclear materials, Reporting and recordkeeping requirements, Security measures.

#### 10 CFR Part 39

Byproduct material, Criminal penalties, Nuclear material, Oil and gas exploration - well logging, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Source material, Special nuclear material.

#### 10 CFR Part 51

Administrative practice and procedure, Environmental impact statement, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements.

#### 10 CFR Part 71

Criminal penalties, Hazardous materials transportation, Import, Nuclear materials, Packaging and containers, Reporting and record keeping requirements.

## 10 CFR Part 73

Criminal penalties, Export, Hazardous materials transportation, Import, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements, Security measures.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 553; the NRC is proposing to adopt the following amendments to 10 CFR parts 30, 32, 33, 34, 35, 36, 37, 39, 51, 71, 73, and 150.

### **PART 30 - RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING OF BYPRODUCT MATERIAL**

1. The authority citation for Part 30 continues to read as follows:

AUTHORITY: Secs. 81, 82, 161, 182, 183, 186, 68 Stat. 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2111, 2112, 2201, 2232, 2233, 2236, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 549 (2005).

Section 30.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102-486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5851). Section 30.34(b) also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 30.61 also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

2. In § 30.6, the introductory text of paragraph (a) is revised to read as follows:

**§ 30.6 Communications.**

(a) Unless otherwise specified or covered under the regional licensing program as provided in paragraph (b) of this section, any communication or report concerning the regulations in parts 30 through 37 and 39 of this chapter and any application filed under these regulations may be submitted to the Commission as follows:

\* \* \* \* \*

3. Section 30.13 is revised to read as follows:

**§ 30.13 Carriers.**

Common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service are exempt from the regulations in this part and parts 31 through 37 and 39 of this chapter and the requirements for a license set forth in section 81 of the Act to the extent that they transport or store byproduct material in the regular course of carriage for another or storage incident thereto.

4. In § 30.32 a new paragraph (l) is added to read as follows:

**§ 30.32 Application for specific licenses.**

\* \* \* \* \*

(l) An application for a specific license to use, store, or transport category 1 or category 2 quantities of radioactive material must include information concerning whether the applicant's proposed security program meets the requirements in part 37 of this chapter.

5. In § 30.33, paragraph (a)(4) is revised to read as follows:

**§ 30.33 General requirements for issuance of specific licenses.**

(a)<sup>\*\*\*</sup>

(4) The applicant satisfies any special requirements contained in parts 32 through 37 and 39; and

\* \* \* \* \*

**PART 32 - SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN ITEMS CONTAINING BYPRODUCT MATERIAL**

6. The authority citation for Part 32 continues to read as follows:

AUTHORITY: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); sec. 651(e), Pub. L. No. 109-58, 119 Stat. 806-810 (42 U.S.C. 2014, 2021, 2021b, 2111).

7. In § 32.1, paragraph (b) is revised to read as follows:

**§ 32.1 Purpose and scope.**

\* \* \* \* \*

(b) The provisions and requirements of this part are in addition to, and not in substitution for, other requirements of this chapter. In particular, the provisions of part 30 of this chapter

apply to applications, licenses and certificates of registration subject to this part, and the provisions of part 37 of this chapter apply to applications and licenses subject to this part.

\* \* \* \* \*

**PART 33 - SPECIFIC DOMESTIC LICENSES OF BROAD SCOPE FOR BYPRODUCT MATERIAL**

8. The authority citation for Part 33 continues to read as follows:

AUTHORITY: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); sec. 651(e), Pub. L. No. 109-58, 119 Stat. 806-810 (42 U.S.C. 2014, 2021, 2021b, 2111).

9. Section 33.1 is revised to read as follows:

**§ 33.1 Purpose and scope.**

This part prescribes requirements for the issuance of specific licenses of broad scope for byproduct material ("broad licenses") and certain regulations governing holders of such licenses. The provisions and requirements of this part are in addition to, and not in substitution for, other requirements of this chapter. In particular, the provisions of parts 30 and 37 of this chapter apply to applications and licenses subject to this part.

**PART 34 - LICENSES FOR INDUSTRIAL RADIOGRAPHY AND RADIATION SAFETY REQUIREMENTS FOR INDUSTRIAL RADIOGRAPHIC OPERATIONS**

10. The authority citation for Part 34 continues to read as follows:

AUTHORITY: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note).

Section 34.45 also issued under sec. 206, 88 Stat. 1246, (42 U.S.C. 5846).

11. Section 34.1 is revised to read as follows:

**§ 34.1 Purpose and scope.**

This part prescribes requirements for the issuance of licenses for the use of sealed sources containing byproduct material and radiation safety requirements for persons using these sealed sources in industrial radiography. The provisions and requirements of this part are in addition to, and not in substitution for, other requirements of this chapter. In particular, the requirements and provisions of parts 19, 20, 21, 30, 37, 71, 150, 170, and 171 of this chapter apply to applications and licenses subject to this part. This rule does not apply to medical uses of byproduct material.

**PART 35 – MEDICAL USE OF BYPRODUCT MATERIAL**

12. The authority citation for Part 35 continues to read as follows:

AUTHORITY: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); sec. 651(e), Pub. L. No. 109-58, 119 Stat. 806-810 (42 U.S.C. 2014, 2021, 2021b, 2111).

13. Section 35.1 is revised to read as follows:

**§ 35.1 Purpose and scope.**

This part contains the requirements and provisions for the medical use of byproduct material and for issuance of specific licenses authorizing the medical use of this material. These requirements and provisions provide for the radiation safety of workers, the general public, patients, and human research subjects. The requirements and provisions of this part are in addition to, and not in substitution for, others in this chapter. The requirements and provisions of parts 19, 20, 21, 30, 37, 71, 170, and 171 of this chapter apply to applicants and licensees subject to this part unless specifically exempted.

**PART 36 – LICENSES AND RADIATION SAFETY REQUIREMENTS FOR IRRADIATORS**

14. The authority citation for Part 36 continues to read as follows:

AUTHORITY: Secs. 81, 82, 161, 182, 183, 186, 68 Stat. 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2111, 2112, 2201, 2232, 2233, 2236, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

15. In § 36.1, paragraph (a) is revised to read as follows:



**§ 36.1 Purpose and scope.**

(a) This part contains requirements for the issuance of a license authorizing the use of sealed sources containing radioactive materials in irradiators used to irradiate objects or materials using gamma radiation. This part also contains radiation safety requirements for operating irradiators. The requirements of this part are in addition to other requirements of this chapter. In particular, the provisions of parts 19, 20, 21, 30, 37, 71, 170, and 171 of this chapter apply to applications and licenses subject to this part. Nothing in this part relieves the licensee from complying with other applicable Federal, State and local regulations governing the siting, zoning, land use, and building code requirements for industrial facilities.

\* \* \* \* \*

16. Part 37 is added to read as follows:

**PART 37 – PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2 QUANTITIES OF RADIOACTIVE MATERIAL**

**Subpart A - General Provisions**

Sec.

37.1 Purpose.

37.3 Scope.

37.5 Definitions.

37.7 Communications.

37.9 Interpretations.

37.11 Specific exemptions.

37.13 Information collection requirements: OMB approval.

**Subpart B – Background Investigations and Access Control Program**

37.21 Personnel access authorization requirements for category 1 or category 2 quantities of radioactive material.

37.23 Access authorization program requirements.

37.25 Background investigations.

- 37.27 Requirements for criminal history records checks of individuals granted unescorted access to category 1 or category 2 quantities of radioactive material.
- 37.29 Relief from fingerprinting, identification, and criminal history records checks and other elements of background investigations for designated categories of individuals permitted unescorted access to certain radioactive materials or other property.
- 37.31 Protection of information.
- 37.33 Access authorization program review.

### **Subpart C – Physical Protection Requirements During Use**

- 37.41 Security program.
- 37.43 General security program requirements.
- 37.45 LLEA coordination and notification.
- 37.47 Security zones.
- 37.49 Monitoring, detection, and assessment.
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- 37.53 Requirements for mobile devices.
- 37.55 Security program review.
- 37.57 Reporting of events.

### **Subpart D – Physical Protection in Transit**

- 37.71 Additional requirements for transfer of category 1 and category 2 quantities of radioactive material.
- 37.73 Applicability of physical protection of category 1 and category 2 quantities of radioactive material during transit.
- 37.75 Preplanning and coordination of shipment of category 1 or category 2 quantities of radioactive material.
- 37.77 Advance notification of shipment of category 1 quantities of radioactive material.
- 37.79 Requirements for physical protection of category 1 and category 2 quantities of radioactive material during shipment.
- 37.81 Reporting of events.

### **Subpart E – (Reserved)**

### **Subpart F – Records**

- 37.101 Form of records.
- 37.103 Record retention.

### **Subpart G – Enforcement**

- 37.105 Inspections.
- 37.107 Violations.

37.109 Criminal penalties.

Appendix A to Part 37—Category 1 and Category 2 Radioactive Materials

AUTHORITY: Secs. 53, 81, 161, 182, 183, 68 Stat. 935, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 223 (42 U.S.C. 2273); sec 234, 83 Stat. 445, as amended; sec. 147, 149 (42 U.S.C. 2133, 2134, 2167, 2168, 2169)

**Subpart A – General Provisions**

**§ 37.1 Purpose.**

This part has been established to provide the requirements for the physical protection program for any licensee that is authorized to possess category 1 or category 2 quantities of radioactive material listed in Appendix A to this part. These requirements provide reasonable assurance of the security of category 1 or category 2 quantities of radioactive material by protecting these materials from theft or diversion. Specific requirements for access to material, use of material, transfer of material, and transport of material are included. No provision of this part authorizes possession of licensed material.

**§ 37.3 Scope.**

(a) Subpart B to this part applies to any person who, under the regulations in this chapter, is authorized to possess or use at any site or contiguous sites subject to the control by the licensee, category 1 or category 2 quantities of radioactive material.

(b) Subpart C to this part applies to any person who, under the regulations in this chapter, is authorized to possess or use at any site or contiguous sites subject to the control by the licensee, category 1 or category 2 quantities of radioactive material.

(c) Subpart D applies to any person who, under the regulations of this chapter, imports, exports, transports, or delivers to a carrier for transport in a single shipment, category 1 or category 2 quantities of radioactive material.

### **§ 37.5 Definitions.**

As used in this part:

*Access control* means a system for allowing only approved individuals to have unescorted access to the security zone and for ensuring that all other individuals are subject to escorted access.

*Act* means the Atomic Energy Act of 1954 (68 Stat. 919), including any amendments thereto.

*Aggregated* means accessible by the breach of a common physical barrier, whether the material made accessible is a single sealed source, multiple sealed sources, or multiple sources of bulk radioactive material.

*Agreement State* means any state with which the Atomic Energy Commission or the Nuclear Regulatory Commission has entered into an effective agreement under subsection 274b. of the Act. *Non-agreement State* means any other State.

*Approved individual* means an individual whom the licensee has determined to be trustworthy and reliable in accordance with subpart B of this part and who has completed the training required by § 37.43(c).

*Background investigation* means the investigation conducted by a licensee or applicant to support the determination of trustworthiness and reliability.

*Becquerel (Bq)* means one disintegration per second.

*Byproduct material* means—(1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material;

(2) The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute "byproduct material" within this definition;

(3)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that—

(A) Has been made radioactive by use of a particle accelerator; and

(B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

(4) Any discrete source of naturally occurring radioactive material, other than source material, that—

(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

*Category 1 quantity of radioactive material* means a quantity of radioactive material meeting or exceeding the category 1 threshold in Table 1 of Appendix A to this part. The quantity is calculated by adding the sum of ratios of the total activity of each radionuclide to the category 1 threshold for that radionuclide. If the ratio is equal to or exceeds 1, the quantity would be considered a category 1 quantity. Category 1 quantities of radioactive material do not include the radionuclides contained in irradiated or mixed oxide fuel.

*Category 2 quantity of radioactive material* means a quantity of radioactive material meeting or exceeding the category 2 threshold but less than the category 1 threshold in Table 1 of Appendix A to this part. The quantity is calculated by adding the sum of ratios of the total activity of each radionuclide to the category 2 threshold for that radionuclide. If the ratio is equal to or exceeds 1, the quantity would be considered a category 2 quantity. Category 2 quantities of radioactive material do not include the radionuclides contained in irradiated or mixed oxide fuel.

*Commission* means the Nuclear Regulatory Commission or its duly authorized representatives.

*Curie* means that amount of radioactive material which disintegrates at the rate of 37 billion atoms per second.

*Diversification* means the unauthorized movement of radioactive material subject to this part to a location different from the material's authorized destination inside or outside of the site at which the material is used or stored.

*Escorted access* means accompaniment while in a security zone by an approved individual who maintains line-of-sight surveillance at all times over an individual who is not approved for unescorted access.

*Fingerprint orders* means the orders issued by the U.S. Nuclear Regulatory Commission or the legally binding requirements issued by Agreement States that require fingerprints and criminal history records checks for individuals with unescorted access to category 1 and category 2 quantities of radioactive material or Safeguards Information.

*Government agency* means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

*Isolation* means protection of category 1 or category 2 quantities of radioactive material by allowing access to security zones only through established access control points.

*License*, except where otherwise specified, means a license for byproduct material issued pursuant to the regulations in parts 30 through 36 and 39 of this chapter;

*License issuing authority* means the licensing agency that issued the license, i.e. the U.S. Nuclear Regulatory Commission or the appropriate agency of an Agreement State;

*Local law enforcement agency (LLEA)* means a government entity that has authority to make arrests and the capability to provide an armed response in locations where licensed category 1 or category 2 quantities of radioactive material are used, stored, or transported.

*Lost or missing licensed material* means licensed material whose location is unknown. It includes material that has been shipped but has not reached its destination and whose location cannot be readily traced in the transportation system.

*Mobile device* means a piece of equipment containing licensed radioactive material that is either mounted on wheels or casters, or otherwise equipped for moving without a need for disassembly or dismounting; or designed to be hand carried. Mobile devices do not include stationary equipment installed in a fixed location.

*Movement control center* means an operations center that is remote from transport activity and that maintains position information on the movement of radioactive material, receives reports of attempted attacks or thefts, provides a means for reporting these and other problems to appropriate agencies and can request and coordinate appropriate aid.

*No-later-than arrival time* means the date and time that the shipping licensee and receiving licensee have established as the time at which an investigation will be initiated if the shipment has not arrived at the receiving facility. The no-later-than-arrival time may not be more than 2 hours after the estimated arrival time for shipments of category 1 quantities of radioactive material. The no-later-than-arrival time may not be more than 4 hours after the estimated arrival time for shipments of category 2 quantities of radioactive material.

*Person* means—

(1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department of Energy (except that the Department shall be considered a person within the meaning of the regulations in 10 CFR chapter I to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission under section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244), the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021), the Nuclear Waste Policy Act of 1982 (96 Stat. 2201), and section 3(b)(2) of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (99 Stat. 1842)), any State or any political subdivision of or any political entity within a State, any foreign government



or nation or any political subdivision of any such government or nation, or other entity; and

(2) Any legal successor, representative, agent, or agency of the foregoing.

*Reviewing official* means the individual who shall make the trustworthiness and reliability determination of an individual to determine whether the individual may have, or continue to have, unescorted access to the category 1 or category 2 quantities of radioactive materials that are possessed by the licensee.

*Sabotage* means deliberate damage, with malevolent intent, to a category 1 or category 2 quantity of radioactive material, a device that contains a category 1 or category 2 quantity of radioactive material, or the components of the security system.

*Safe haven* means a readily recognizable and readily accessible site at which security is present or from which, in the event of an emergency, the transport crew can notify and wait for the local law enforcement authorities.

*Security zone* means any temporary or permanent area determined and established by the licensee for the physical protection of category 1 or category 2 quantities of radioactive material.

*State* means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

*Telemetric position monitoring system* means a data transfer system that captures information by instrumentation and/or measuring devices about the location and status of a transport vehicle or package between the departure and destination locations.

*Temporary job site* means, for the purposes of this part, a location where category 1 or category 2 quantities of radioactive material may be used or stored other than a location of use that is specifically identified on the license.

*Trustworthiness and reliability* are characteristics of an individual considered dependable in judgment, character, and performance, such that unescorted access to category 1 or category 2 quantities of radioactive material by that individual does not constitute an unreasonable risk to the public health and safety or common defense and security. A determination of trustworthiness and reliability for this purpose is based upon the results from a background investigation.

*Unescorted access* means solitary access to category 1 or category 2 quantities of radioactive material granted to an approved individual. Unescorted access includes solitary access to sufficient quantities of radioactive material such that an individual could successfully accumulate lesser quantities of material into a category 1 or category 2 quantity.

*United States*, when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

### **§ 37.7 Communications.**

Except where otherwise specified or covered under the regional licensing program as provided in § 30.6(b), all communications and reports concerning the regulations in this part may be sent as follows:

(a) By mail addressed to: ATTN: Document Control Desk; Director, Office of Nuclear Reactor Regulation; Director, Office of New Reactors; Director, Office of Nuclear Material Safety and Safeguards; Director, Office of Federal and State Materials and Environmental Management Programs; or Director, Division of Nuclear Security, Office of Nuclear Security and

Incident Response, as appropriate, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001;

(b) By hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland;

(c) Where practicable, by electronic submission, for example, Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at <http://www.nrc.gov/site-help/e-submittals.html>, by e-mail to [MSHD.Resource@nrc.gov](mailto:MSHD.Resource@nrc.gov); or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

#### **§ 37.9 Interpretations.**

Except as specifically authorized by the Commission in writing, no interpretations of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized as binding upon the Commission.

#### **§ 37.11 Specific exemptions.**

(a) The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

(b) Any licensee's activities are exempt from the requirements of this part to the extent that its activities are covered under the physical protection requirements of part 73 of this chapter.

**§ 37.13 Information collection requirements: OMB approval.**

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-xxxx

(b) The approved information collection requirements contained in this part appear in §§ 37.21, 37.23, 37.25, 37.27, 37.29, 37.31, 37.33, 37.41, 37.43, 37.45, 37.49, 37.55, 37.57, 37.71, 37.75, 37.77, 37.79, and 37.81.

**Subpart B – Background Investigations and Access Authorization Program**

**§ 37.21 Personnel access authorization requirements for category 1 or category 2 quantities of radioactive material.**

(a) *General.*

(1) Each licensee that is authorized to possess category 1 or category 2 quantities of radioactive material at a facility shall comply with the requirements of this subpart, as appropriate.

(2) Each licensee shall establish, implement, and maintain its access authorization program in accordance with the requirements of this subpart.

(3) By **(Insert date - 30 days - after the final rule is published in the *Federal Register*)**, each licensee that is authorized to possess a category 1 or category 2 quantity of radioactive material on **(insert the effective date of this rule)** shall submit information concerning the licensee's compliance with the requirements of this subpart to the appropriate Regional Administrator.

(4) Each licensee that would become newly subject to the requirements of this subpart upon application for modification of its license shall implement the requirements of this subpart, as appropriate, before taking possession of category 1 or category 2 quantities of radioactive material.

(b) *General performance objective.* The licensee's access authorization program must ensure that the individuals specified in paragraph (c)(1) of this section are trustworthy and reliable such that they do not constitute an unreasonable risk to public health and safety or the common defense and security.

(c) *Applicability.*

(1) Licensees shall subject the following individuals to an access authorization program:

(i) Any individual whose assigned duties require unescorted access to category 1 or category 2 quantities of radioactive material;

(ii) Vehicle drivers and accompanying individuals for road shipments of category 1 quantities of radioactive material;

(iii) Movement control center personnel for shipments of category 1 quantities of radioactive material;

(iv) Any individual whose assigned duties provide access to shipment information that is considered to be Safeguards Information-Modified Handling related to category 1 quantities of radioactive material; and

(v) Reviewing officials.

(2) Licensees need not subject the categories of individuals listed in § 37.29(a) through (m) to the investigation elements of the access authorization program.

(3) Licensees shall approve for unescorted access to category 1 or category 2 quantities of radioactive material only those individuals with job duties that require unescorted access to category 1 or category 2 quantities of radioactive material.

**§ 37.23 Access authorization program requirements.**

(a) *Granting unescorted access authorization.*

(1) Licensees shall implement the requirements of this subpart for granting initial or reinstated unescorted access authorization.

(2) Individuals who have been determined to be trustworthy and reliable shall also complete the security training required by § 37.43(c) before being allowed unescorted access to category 1 or category 2 quantities of radioactive material.

(b) *Reviewing officials.*

(1) Each licensee shall nominate one or more individuals to be reviewing officials and shall submit the names of these individuals and their fingerprints to the NRC for a criminal history records check. The nominated individuals shall undergo the background investigation aspects that are required by § 37.25(a)(2) through (a)(9) before their names and fingerprints are submitted to the NRC. The fingerprints of the nominated reviewing official must be taken by

a law enforcement agency, Federal or State agencies that provide finger printing services to the public, or commercial fingerprinting services authorized by a State to take fingerprints.

(2) Reviewing officials must be required to have unescorted access to category 1 or category 2 quantities of radioactive materials or access to safeguards information, if the licensee possesses safeguards information, as part of their job duties.

(3) Reviewing officials cannot approve other individuals to act as reviewing officials.

(4) Reviewing officials nominated by the licensee and approved by the NRC are the only individuals who may make trustworthiness and reliability determinations and permit unescorted access to category 1 or category 2 quantities of radioactive materials possessed by the licensee.

(5) Reviewing officials may not make any trustworthiness and reliability determinations or permit any individual to have unescorted access until they have been approved as a reviewing official by the NRC.

(6) Individuals nominated as reviewing officials who receive a preliminary denial from the NRC have the right to complete, correct, and explain information obtained through the background investigation prior to a final adverse determination.

(c) *Informed consent.*

(1) Licensees may not initiate a background investigation without the informed and signed consent of the subject individual. This consent must include authorization to share personal information with other individuals or organizations as necessary to complete the background investigation. Before a final adverse determination, the licensee shall provide the individual with an opportunity to correct any inaccurate or incomplete information that is developed during the background investigation. Licensees do not need to obtain signed

consent from those individuals that have undergone a background investigation under the Fingerprint Orders. A signed consent must be obtained prior to any reinvestigation.

(2) The subject individual may withdraw his or her consent at any time. Licensees shall inform the individual that:

(i) If an individual withdraws his or her consent, the licensee may not initiate any elements of the background investigation that were not in progress at the time the individual withdrew his or her consent; and

(ii) The withdrawal of consent for the background investigation is sufficient cause for denial or termination of unescorted access authorization.

(d) *Personal history disclosure.* Any individual who is applying for unescorted access authorization shall disclose the personal history information that is required by the licensee's access authorization program for the reviewing official to make a determination of the individual's trustworthiness and reliability. Refusal to provide, or the falsification of, any personal history information required by this subpart is sufficient cause for denial or termination of unescorted access.

(e) *Determination basis.*

(1) The reviewing official shall determine whether to grant, deny, unfavorably terminate, maintain, or administratively withdraw an individual's unescorted access authorization based on an evaluation of all of the information required by this subpart. The reviewing official may terminate or administratively withdraw an individual's unescorted access authorization based on information obtained after the background investigation has been completed and the individual granted unescorted access authorization.



(2) The reviewing official may not permit any individual to have unescorted access until the reviewing official has evaluated all of the information required by this subpart and determined that the individual is trustworthy and reliable. The reviewing official may deny unescorted access to any individual based on disqualifying information obtained at any time during the background investigation.

(3) The licensee shall document the basis for concluding whether or not there is reasonable assurance that an individual granted unescorted access to category 1 or category 2 quantities of radioactive material is trustworthy and reliable. Licensees shall maintain a list of persons currently approved for unescorted access authorization and a list of those individuals that have been denied unescorted access authorization. When a licensee determines that a person no longer requires unescorted access, the licensee shall immediately remove the person from the approved list and take measures to ensure that the individual is unable to obtain unescorted access.

(f) *Procedures.*

(1) Licensees shall develop, implement, and maintain written procedures for conducting background investigations for persons who are applying for unescorted access authorization to category 1 or category 2 quantities of radioactive material.

(2) Licensees shall develop, implement, and maintain written procedures for updating background investigations for persons who are applying for reinstatement of unescorted access authorization.

(3) Licensees shall develop, implement, and maintain written procedures to ensure that persons who have been denied unescorted access authorization are not allowed unescorted access to category 1 or category 2 quantities of radioactive material.

(4) Licensees shall develop, implement, and maintain written procedures for the notification of individuals who are denied unescorted access. The procedures must include provisions for the review, at the request of the affected individual, of a denial or termination of unescorted access authorization. The procedure must contain a provision to ensure that the individual is informed of the grounds for the denial or termination of unescorted access authorization and allow the individual an opportunity to provide additional relevant information.

*(g) Right to correct and complete information.*

(1) Prior to any final adverse determination, licensees shall provide each individual subject to this subpart with the right to complete, correct, and explain information obtained as a result of the licensee's background investigation. Confirmation of receipt by the individual of this notification must be maintained by the licensee for a period of 1 year from the date of the notification.

(2) If after reviewing their criminal history record an individual believes that it is incorrect or incomplete in any respect and wishes to change, correct, update, or explain anything in the record, the individual may initiate challenge procedures. These procedures include direct application by the individual challenging the record to the law enforcement agency that contributed the questioned information or a direct challenge as to the accuracy or completeness of any entry on the criminal history record to the Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Division, ATTN: SCU, Mod. D-2, 1000 Custer Hollow Road, Clarksburg, WV 26306 as set forth in 28 CFR 16.30 through 16.34. In the latter case, the Federal Bureau of Investigation (FBI) will forward the challenge to the agency that submitted the data, and will request that the agency verify or correct the challenged entry. Upon receipt of an official communication directly from the agency that contributed the original information, the FBI Identification Division makes any changes necessary in accordance with the information

supplied by that agency. Licensees must provide at least 10 days for an individual to initiate action to challenge the results of an FBI criminal history records check after the record being made available for his or her review. The licensee may make a final adverse determination based upon the criminal history records only after receipt of the FBI's confirmation or correction of the record.

(h) *Records.*

(1) The licensee shall retain documentation regarding the trustworthiness and reliability of individual employees for 5 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

(2) The licensee shall retain a copy of the current access authorization program procedures as a record for 5 years after the procedure is no longer needed or until the Commission terminates the license, if the license is terminated before the end of the retention period. If any portion of the procedure is superseded, the licensee shall retain the superseded material for 5 years after the record is superseded.

(3) The licensee shall retain the list of persons approved for unescorted access authorization and the list of those individuals that have been denied unescorted access authorization for 5 years after the list is superseded or replaced.

**§ 37.25 Background investigations.**

(a) *Initial Investigation.* Before granting an individual unescorted access to category 1 or category 2 quantities of radioactive material, licensees shall complete a background investigation of the individual seeking unescorted access authorization. The scope of the investigation must encompass at least the 10 years preceding the date of the background

investigation or since the individual's eighteenth birthday, whichever is shorter. The background investigation must include at a minimum:

(1) Fingerprinting and an FBI identification and criminal history records check in accordance with § 37.27 or part 73 of this chapter;

(2) Verification of true identity. Licensees shall verify the true identity of the individual who is applying for unescorted access authorization to ensure that the applicant is who he or she claims to be. A licensee shall review official identification documents (e.g., driver's license; passport; government identification; certificate of birth issued by the state, province, or country of birth) and compare the documents to personal information data provided by the individual to identify any discrepancy in the information. Licensees shall document the type, expiration, and identification number of the identification document, or maintain a photocopy of identifying documents on file in accordance with § 37.31. Licensees shall certify in writing that the identification was properly reviewed, and shall maintain the certification and all related documents for review upon inspection;

(3) Employment history evaluation. Licensees shall complete an employment history evaluation. Licensees shall verify the individual's employment with each previous employer for the most recent 10 years before the date of application;

(4) Verification of education. Licensees shall verify that the individual participated in the education process during the claimed period;

(5) Military history verification. Licensees shall verify that the individual was in the military during the claimed period;

(6) Credit history evaluation. Licensees shall evaluate the full credit history of the individual who is applying for unescorted access authorization. A full credit history evaluation

must include, but is not limited to, a review and evaluation of all of the information that is provided by a national credit-reporting agency about the individual's credit history. For individuals including foreign nationals and United States citizens who have resided outside the United States and do not have established credit history that covers at least the most recent 7 years in the United States, the licensee must document all attempts to obtain information regarding the individual's credit history and financial responsibility from some relevant entity located in that other country or countries;

(7) Criminal history review. Reviewing officials shall obtain from local criminal justice resources the criminal history records of the individual who is applying for unescorted access authorization and evaluate the information to determine whether the individual has a record of local criminal activity that may adversely impact his or her trustworthiness and reliability. The scope of the applicant's local criminal history review must cover all residences of record for the 10-year period preceding the date of the application for unescorted access authorization;

(8) Character and reputation determination. Licensees shall complete reference checks to determine the character and reputation of the individual who has applied for unescorted access authorization. Reference checks may not be conducted with any person who is known to be a close member of the individual's family, including but not limited to the individual's spouse, parents, siblings, or children, or any individual who resides in the individual's permanent household. Reference checks under this subpart must be limited to whether the individual has been and continues to be trustworthy and reliable;

(9) The licensee shall also, to the extent possible, obtain independent information to corroborate that provided by the individual (e.g., seek references not supplied by the individual);  
and

(10) If a previous employer, educational institution, or any other entity with which the individual claims to have been engaged fails to provide information or indicates an inability or unwillingness to provide information within a time frame deemed appropriate by the licensee but at least after 10 business days of the request, the licensee shall:

(i) Document the refusal, unwillingness, or inability in the record of investigation; and

(ii) Obtain a confirmation of employment, educational enrollment and attendance, or other form of engagement claimed by the individual from at least one alternate source that has not been previously used.

(b) *Grandfathering.* Individuals who have been determined trustworthy and reliable for unescorted access to category 1 or category 2 quantities of radioactive material under the Fingerprint Orders do not need to meet the background investigation elements in this subpart until the 10-year re-investigation.

(c) *Reinvestigations.* Licensees shall conduct a criminal history update and credit history reevaluation every 10 years for any individual with unescorted access to category 1 or category 2 quantities of radioactive material. The reinvestigations must be completed within 10 years of the date on which these elements were last completed and must address the 10 years following the previous investigation.

**§ 37.27 Requirements for criminal history records checks of individuals granted unescorted access to category 1 or category 2 quantities of radioactive material.**

(a) *General performance objective and requirements.*

(1) Except for those individuals listed in § 37.29, each licensee subject to the provisions of this subpart shall fingerprint each individual who is to be permitted unescorted access to category 1 or category 2 quantities of radioactive material. Licensees shall transmit all

collected fingerprints to the Commission for transmission to the FBI. The licensee shall use the information received from the FBI as part of the required background investigation to determine whether to grant or deny further unescorted access to category 1 or category 2 quantities of radioactive materials for that individual.

(2) The licensee shall notify each affected individual that his or her fingerprints will be used to secure a review of their criminal history record, and shall inform him or her of the procedures for revising the record or adding explanations to the record.

(3) Fingerprinting is not required if a licensee is reinstating an individual's unescorted access authorization to category 1 or category 2 quantities of radioactive materials if:

(i) The individual returns to the same facility that granted unescorted access authorization within 365 days of the termination of his or her unescorted access authorization; and

(ii) The previous access was terminated under favorable conditions.

(4) Fingerprints do not need to be taken if an individual who is an employee of a licensee, contractor, manufacturer, or supplier has been granted unescorted access to category 1 or category 2 quantities of radioactive material or access to safeguards information by another licensee, based upon a background investigation conducted under this subpart, the Fingerprint Orders, or part 73 of this chapter. An existing criminal history records check file may be transferred to the licensee asked to grant unescorted access in accordance with the provisions of § 37.31(a)(3).

(5) Licensees shall review the criminal history records as part of the trustworthiness and reliability evaluation for each individual seeking unescorted access authorization to category 1 or category 2 quantities of radioactive material.

(6) Licensees shall use the information obtained as part of a criminal history records check solely for the purpose of determining an individual's suitability for unescorted access authorization to category 1 or category 2 quantities of radioactive materials or access to Safeguards Information.

*(b) Prohibitions.*

(1) Licensees may not base a final determination to deny an individual unescorted access authorization to category 1 or category 2 quantities of radioactive material solely on the basis of information received from the FBI involving:

(i) An arrest more than 1 year old for which there is no information of the disposition of the case; or

(ii) An arrest that resulted in dismissal of the charge or an acquittal.

(2) Licensees may not use information received from a criminal history records check obtained under this subpart in a manner that would infringe upon the rights of any individual under the First Amendment to the Constitution of the United States, nor shall licensees use the information in any way that would discriminate among individuals on the basis of race, religion, national origin, gender, or age.

*(c) Procedures for processing of fingerprint checks.*

(1) For the purpose of complying with this subpart, licensees shall use an appropriate method listed in § 37.7 to submit to the Office of Administration, Personnel Security Branch, Mail Stop TWB-05 B32M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0012, one completed, legible standard fingerprint card (Form FD-258, ORIMDNRCOOOZ), electronic fingerprint scan or, where practicable, other fingerprint record for each individual requiring unescorted access to category 1 or category 2 quantities of radioactive material. Copies of



these forms may be obtained by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by calling (301) 415-7232, or by e-mail to *FORMS.Resource@nrc.gov*. Guidance on submitting electronic fingerprints can be found at <http://www.nrc.gov/site-help/e-submittals.html>.

(2) Fees for the processing of fingerprint checks are due upon application. Licensees shall submit payment with the application for the processing of fingerprints through corporate check, certified check, cashier's check, money order, or electronic payment, made payable to "U.S. NRC." (For guidance on making electronic payments, contact the Security Branch, Division of Facilities and Security at (301) 415-7404). Combined payment for multiple applications is acceptable. The Commission publishes the amount of the fingerprint check application fee on the NRC public Web site. (To find the current fee amount, go to the Electronic Submittals page at <http://www.nrc.gov/site-help/e-submittals.html> and select the link for the Criminal History Program.)

(3) The Commission will forward to the submitting licensee all data received from the FBI as a result of the licensee's application(s) for criminal history records checks.

**§ 37.29 Relief from fingerprinting, identification, and criminal history records checks and other elements of background investigations for designated categories of individuals permitted unescorted access to certain radioactive materials or other property.**

Fingerprinting, and the identification and criminal history records checks required by section 149 of the Atomic Energy Act of 1954, as amended, and other elements of the background investigation are not required for the following individuals prior to granting unescorted access to category 1 or category 2 quantities of radioactive materials:

(a) An employee of the Commission or of the Executive Branch of the U.S. Government who has undergone fingerprinting for a prior U.S. Government criminal history records check;

(b) A Member of Congress;

(c) An employee of a member of Congress or Congressional committee who has undergone fingerprinting for a prior U.S. Government criminal history records check;

(d) The Governor of a State or his or her designated State employee representative;

(e) Federal, State, or local law enforcement personnel;

(f) State Radiation Control Program Directors and State Homeland Security Advisors or their designated State employee representatives;

(g) Agreement State employees conducting security inspections on behalf of the NRC under an agreement executed under section 274.i. of the Atomic Energy Act;

(h) Representatives of the International Atomic Energy Agency (IAEA) engaged in activities associated with the U.S./IAEA Safeguards Agreement who have been certified by the NRC;

(i) Emergency response personnel who are responding to an emergency;

(j) Commercial vehicle drivers for road shipments of category 2 quantities of radioactive material;

(k) An individual who has had a favorably adjudicated U.S. Government criminal history records check within the last 5 years, under a comparable U.S. Government program involving fingerprinting and an FBI identification and criminal history records check (e.g. National Agency

Check, Transportation Worker Identification Credentials (TWIC) under 49 CFR 1572, Bureau of Alcohol Tobacco Firearms and Explosives background check and clearances under 27 CFR 555, Health and Human Services security risk assessments for possession and use of select agents and toxins under 42 CFR 73, Hazardous Material security threat assessment for hazardous material endorsement to commercial drivers license under 49 CFR 1572, Customs and Border Patrol's Free and Secure Trade (FAST) Program) provided that he or she makes available the appropriate documentation. Written confirmation from the agency/employer that granted the Federal security clearance or reviewed the criminal history records check must be provided to the licensee. The licensee shall retain this documentation for a period of 5 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material;

(l) Any individual who has an active Federal security clearance, provided that he or she makes available the appropriate documentation. Written confirmation from the agency/employer that granted the Federal security clearance or reviewed the criminal history records check must be provided to the licensee. The licensee shall retain this documentation for a period of 5 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material; and

(m) Any individual employed by a service provider licensee for which the service provider licensee has conducted the background investigation for the individual and approved the individual for unescorted access to category 1 or category 2 quantities of radioactive material. Written verification from the service provider must be provided to the licensee. The licensee shall retain the documentation for a period of 5 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

**§ 37.31 Protection of information.**

(a) Each licensee who obtains background information on an individual under this subpart shall establish and maintain a system of files and written procedures for protection of the record and the personal information from unauthorized disclosure.

(b) The licensee may not disclose the record or personal information collected and maintained to persons other than the subject individual, his or her representative, or to those who have a need to have access to the information in performing assigned duties in the process of granting or denying unescorted access to category 1 or category 2 quantities of radioactive material or Safeguards Information. No individual authorized to have access to the information may disseminate the information to any other individual who does not have a need to know.

(c) The personal information obtained on an individual from a background investigation may be provided to another licensee:

(i) Upon the individual's written request to the licensee holding the data to disseminate the information contained in his or her file; and

(ii) The recipient licensee verifies information such as name, date of birth, social security number, gender, and other applicable physical characteristics.

(d) The licensee shall make background investigation records obtained under this subpart available for examination by an authorized representative of the NRC to determine compliance with the regulations and laws.

(e) The licensee shall retain all fingerprint and criminal history records (including data indicating no record) received from the FBI, or a copy of these records if the individual's file has

been transferred, on an individual for 5 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

**§ 37.33 Access authorization program review.**

(a) Each licensee shall be responsible for the continuing effectiveness of the access authorization program. Each licensee shall ensure that access authorization programs are reviewed to confirm compliance with the requirements of this subpart and that comprehensive actions are taken to correct any noncompliance that is identified. The review program shall evaluate all program performance objectives and requirements. Each licensee shall ensure that its entire access program is reviewed at a frequency not to exceed 12 months.

(b) The results of the reviews, along with any recommendations, must be documented. Each review report must identify conditions that are adverse to the proper performance of the access authorization program, the cause of the condition(s), and, when appropriate, recommend corrective actions, and corrective actions taken. The licensee shall review the findings and take any additional corrective actions necessary to preclude repetition of the condition, including reassessment of the deficient areas where indicated.

(c) Review records must be maintained for 5 years.

**Subpart C – Physical Protection Requirements during Use**

**§ 37.41 Security program.**

(a) *Applicability.*

(1) Each licensee that possesses an aggregated quantity of category 1 or category 2 radioactive material shall establish, implement, and maintain a security program in accordance with the requirements of this subpart.

(2) A licensee that is authorized to possess at least a category 2 quantity of radioactive material but does not possess an aggregated quantity that equals or exceeds the category 2 threshold shall develop a security program in accordance with the requirements of this subpart. At least 90 days before a licensee aggregates radioactive material to a quantity that equals or exceeds the category 2 threshold, the licensee shall implement its security program. The licensee shall provide written notification to the NRC regional office specified in § 30.6 of this chapter that the licensee is now implementing its security program as follows:

(i) If the aggregated quantity of radioactive material fluctuates above and below the category 2 threshold more than once in a 90-day period and will continue to do so indefinitely, the licensee need only notify the NRC the first time the security program is to be implemented. This notification must inform the NRC that the licensee aggregates material at or above the category 2 threshold from time to time and that the licensee will implement the security program whenever the material is aggregated at or above the category 2 threshold. If the security program is discontinued for more than 90 days, then the licensee shall notify the NRC the next time the security program is to be implemented.

(ii) If the aggregated quantity of radioactive material does not fluctuate above and below the category 2 threshold more than once in a 90-day period, the licensee shall notify the NRC each time a previously discontinued or new security program is to be implemented.

(b) *General performance objective.* Each licensee shall establish, implement, and maintain a security program that is designed to monitor, and without delay detect, assess, and respond to an actual or attempted unauthorized access to category 1 or category 2 quantities of radioactive material.

(c) *Program features.* Each licensee's security program must include the program features, as appropriate, described in §§ 37.43, 37.45, 37.47, 37.49, 37.51, 37.53, and 37.55.

d) *Information submittal and notification.* By **(Insert date - 30 days - after the final rule is published in the *Federal Register*)**, each licensee that is authorized to possess a category 1 or category 2 quantity of radioactive material on the effective date of this regulation shall submit information concerning the licensee's compliance with the requirements of this subpart to the appropriate Regional Administrator.

### **§ 37.43 General security program requirements.**

(a) *Security plan.*

(1) Each licensee subject to the requirements of this subpart shall develop a written security plan. The purpose of the security plan is to establish the licensee's overall security strategy to ensure the integrated and effective functioning of the security program required by this subpart. The security plan must at a minimum:

(i) Describe the measures and strategies used to implement the requirements of this subpart;

(ii) Identify the security resources, equipment, and technology used to satisfy the requirements of this subpart;

(iii) Describe any site-specific conditions that affect implementation of Commission requirements; and

(iv) Describe the training by which individuals implementing the security program will be informed of their responsibilities and of any changes that may affect their ability to implement the security program.

(2) The security plan must be reviewed and approved by the individual with overall responsibility for the security program.

(3) A licensee shall revise its security plan as necessary to ensure the effective implementation of Commission requirements. The licensee shall ensure that:

(i) The revision has been reviewed and approved by the individual with overall responsibility for the security program and licensee management; and

(ii) The affected individuals are instructed on the revised plan before the changes are implemented.

(4) The licensee shall retain a copy of the current security plan as a record until the Commission terminates the license and, if any portion of the plan is superseded, retain the superseded material for 5 years after the record is superseded.

*(b) Implementing procedures.*

(1) The licensee shall develop and maintain written procedures that document how the requirements of this subpart and the security plan will be met.

(2) The implementing procedures and revisions to these procedures must be approved in writing by the individual with overall responsibility for the security program.

(3) The licensee shall retain a copy of the current procedure as a record until the Commission terminates the license and, if any portion of the procedure is superseded, retain the superseded material for 5 years after the record is superseded.

*(c) Training.*

(1) Each licensee shall conduct training on the security plan to ensure that those individuals responsible for implementing the security plan possess and maintain the knowledge,



skills, and abilities to carry out their assigned duties and responsibilities effectively. The training must include instruction in:

(i) The licensee's security program and procedures to secure category 1 or category 2 quantities of radioactive material, and in the purposes and functions of the security measures employed;

(ii) The responsibility to report promptly to the licensee any condition that causes or may cause a violation of Commission requirements;

(iii) The responsibility to report promptly to the local law enforcement agency and licensee any actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material; and

(iv) The appropriate response to security alarms.

(2) In determining those individuals who shall be trained on the security plan, the licensee shall consider each individual's assigned activities during authorized use and response to potential situations involving actual or attempted theft, diversion, or sabotage of category 1 or category 2 quantities of radioactive material. The extent of the training must be commensurate with the individual's potential involvement in the security of category 1 or category 2 quantities of radioactive material as detailed in the licensee's security plan.

(3) Refresher training must be provided at a frequency not to exceed 12 months and when significant changes have been made to the security program. This training must include:

(i) Review of the training requirements of paragraph (c) of this section, and any changes made since the last training;

(ii) Reports on any relevant security issues, problems, and lessons learned;

(iii) Relevant results of NRC inspections; and

(iv) Relevant results of the licensee's program review and testing and maintenance.

(4) The licensee shall maintain records of the initial and refresher training for 5 years from the date of the training. The training records must include dates of the training, topics covered, a list of licensee personnel in attendance, and related information.

(d) *Protection of information.*

(1) Except as provided in paragraph (d)(8) of this section, licensees authorized to possess category 1 or category 2 quantities of radioactive material shall limit access to and unauthorized disclosure of their security plan and implementing procedures.

(2) Efforts to limit access shall include the development, implementation, and maintenance of written policies and procedures for controlling access to, and for proper handling and protection against unauthorized disclosure of, the security plan and implementing procedures.

(3) Before granting an individual access to the security plan or implementing procedures, licensees shall:

(i) Evaluate an individual's need to know the security plan or implementing procedures; and

(ii) Complete a background investigation to determine the individual's trustworthiness and reliability. A trustworthy and reliability determination shall be conducted by the reviewing official and shall include the background investigation elements contained in § 37.25(a)(2) through (a)(10). The § 37.25(a)(1) fingerprinting and criminal history records check

requirements shall not be applied to those individuals who do not require unescorted access to category 1 or category 2 quantities of radioactive material.

(4) Licensees need not subject the following individuals to the background investigation elements for protection of information:

(i) The categories of individuals listed in § 37.29(a) through (m); or

(ii) Security service provider employees, provided written verification that the employee has been determined to be trustworthy and reliable by the required background investigation in § 37.25(a)(2) through (a)(10) has been provided by the security service provider.

(5) The licensee shall document the basis for concluding that an individual is trustworthy and reliable and should be granted access to the security plan or implementing procedures. Licensees shall maintain a list of persons currently approved for access to the security plan or implementing procedures. When a licensee determines that a person no longer needs access to the security plan or implementing procedures, the licensee shall immediately remove the person from the approved list and take measures to ensure that the individual is unable to obtain the security plan or implementing procedures.

(6) When not in use, the licensee shall store their security plan and implementing procedures in a manner to prevent removal. Information stored in non-removable electronic form must be password protected.

(7) The licensee shall retain as a record for 5 years after the document is no longer needed:

(i) A copy of the information protection procedures; and

(ii) The list of individuals approved for access to the security plan or implementing procedures

(8) Licensees that possess safeguards information or safeguards information-modified handling are subject to the requirements of § 73.21 of this chapter, and shall protect any safeguards information or safeguards information-modified handling in accordance with the requirements of that section.

**§ 37.45 LLEA coordination and notification.**

*(a) LLEA coordination.*

(1) A licensee subject to this subpart shall provide information to and coordinate to the extent practicable with an LLEA for responding to threats to the licensee's facility, including any necessary armed response. The information provided to the LLEA must include:

(i) A description of the facilities and radioactive materials subject to this subpart;

(ii) A description of the licensee's security measures that have been implemented to comply with this subpart;

(iii) A notification that the licensee will request a timely armed response by the LLEA to any actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of material;

(iv) A request for information about the LLEA's capabilities to provide a timely armed response taking into consideration the description of the security measures provided in paragraph (a)(1)(ii) of this section;

(v) A request to establish a written agreement with the LLEA that describes the LLEA's commitments to provide a response in accordance with this section;

(vi) A request to establish a means of direct communication with an LLEA-designated point of contact for security emergencies involving actual or attempted theft or sabotage of licensee materials;

(vii) A request that the LLEA notify the licensee whenever the LLEA's contact information changes;

(viii) A request that the LLEA notify the licensee whenever the LLEA's response capabilities become degraded or it becomes incapable of providing a timely armed response; and

(ix) A request for information about the LLEA's willingness to participate in drills and exercises.

(2) The licensee shall notify the appropriate NRC regional office listed in § 30.6(a)(2) of this chapter within three business days if:

(i) The LLEA has not responded to the request for coordination within 60 days of the coordination request; or

(ii) The LLEA notifies the licensee that the LLEA does not plan to participate in coordination activities.

(3) The licensee shall document its efforts to coordinate with the LLEA to provide a response to threats to the licensee's facility. The licensee's documentation must include:

(i) Dates, times, and locations of meetings with the LLEA;

(ii) Licensee personnel present;

(iii) LLEA personnel present; and

(iv) Copies of any correspondence between the licensee and LLEA.

(4) The licensee shall coordinate with the LLEA at a frequency no greater than 12 months, or when changes to the facility design or operation adversely affect the potential vulnerability of the licensee's material to theft, sabotage, or diversion. The coordination activities shall include verification of contact information and response capabilities.

(5) The licensee shall notify the appropriate NRC regional office listed in § 30.6(a)(2) of this chapter within three business days after the licensee becomes aware of any applicable state or local agency requirement that an initial response to an emergency involving radioactive materials must be provided by other than armed LLEA personnel.

*(b) LLEA notification for temporary job sites.*

(1) At least three business days prior to beginning work at temporary job sites where the licensee will use or store category 1 or category 2 quantities of radioactive material for more than seven consecutive calendar days, the licensee shall provide advance written notification to the appropriate LLEA. Advance notification must include:

(i) An explanation that the licensee is required to provide this notification to the LLEA in accordance with this section;

(ii) An explanation that the licensee will request an armed response from the LLEA in the event of an actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material at the temporary job site;

(iii) Information on the quantities of radioactive material involved and the potential hazards associated with loss of control of the material;

(iv) Scheduled start date and expected duration of the licensee's work requiring the use or storage of category 1 or category 2 quantities of radioactive materials at the temporary job site for which this notice is provided;

(v) Address of the temporary job site, if available, or sufficient directions to allow the LLEA to determine the location of the temporary job site;

(vi) Names and contact information for licensee personnel expected to be present at the temporary job site and responsible for the security of category 1 or category 2 quantities of radioactive material;

(vii) Names and contact information for other licensee personnel to be contacted in an emergency or for additional information;

(viii) Names and contact information for the NRC Region responsible for oversight of the licensee's activities at the temporary job site that the LLEA may contact for information; and

(ix) A request that the LLEA confirm receipt of the notification.

(2) If an emergency or other unforeseen circumstance does not allow the licensee to provide three business days written advance notice to the LLEA, the licensee shall notify the LLEA as soon as possible via telephone, facsimile, or e-mail.

(3) The licensee shall maintain documentation of all temporary job site notifications sent to the LLEA and any confirmations provided by the LLEA.

(c) *Records.* The licensee shall maintain records of its coordination activities with any LLEA in the development of the licensee's security plan, and copies of all documents and correspondence provided to or received from any LLEA in accordance with this section. Records of coordination activities at a temporary job site must be maintained for a period of 5 years.

**§ 37.47 Security zones.**

(a) Licensees shall ensure that all aggregated category 1 and category 2 quantities of radioactive material are used or stored within licensee-established security zones. Security zones may be permanent or temporary.

(b) Temporary security zones must be established as necessary to meet the licensee's transitory or intermittent business activities, such as periods of maintenance, source delivery, and source replacement.

(c) Security zones must, at a minimum, allow unescorted access only to approved individuals through:

(1) Isolation of category 1 and category 2 quantities of radioactive materials by the use of continuous physical barriers that allow access to the security zone only through established access control points; or

(2) Direct control of the security zone by approved individuals at all times; or

(3) A combination of continuous physical barriers and direct control.

(d) For category 1 quantities of radioactive material during periods of maintenance, source receipt, preparation for shipment, installation, or source removal or exchange, the licensee shall, at a minimum, provide an approved individual to maintain continuous surveillance of sources in temporary security zones and in any security zone in which physical barriers or intrusion detection systems have been disabled to allow such activities.

**§ 37.49 Monitoring, detection, and assessment.**

(a) *Monitoring and detection.*

(1) Licensees shall establish and maintain the capability to continuously monitor and detect without delay all unauthorized entries into its security zones. Licensees shall provide the



means to maintain continuous monitoring and detection capability in the event of a loss of the primary power source, or provide for an alarm and response in the event of a loss of this capability to continuously monitor and detect unauthorized entries.

(2) Monitoring and detection must be performed by:

(i) A monitored intrusion detection system that is linked to an on-site or off-site central monitoring facility;

(ii) Electronic devices for intrusion detection alarms that will alert nearby facility personnel;

(iii) Visual monitoring by video surveillance cameras; or

(iv) Visual inspection by approved individuals.

(3) A licensee subject to this subpart shall also have a means to detect unauthorized removal of the radioactive material from the security zone. This detection capability must provide:

(i) For category 1 quantities of radioactive material, immediate detection of any attempted unauthorized removal of the radioactive material from the security zone. Such immediate detection capability must be provided by:

(A) Electronic sensors linked to an alarm;

(B) Continuous monitored video surveillance; or

(C) Direct visual surveillance.

(ii) For category 2 quantities of radioactive material, weekly verification through physical checks, tamper indicating devices, use, or other means to ensure that the radioactive material is present.

(b) *Assessment.* Licensees shall immediately assess each actual or attempted unauthorized entry into the security zone to determine whether the unauthorized access was an actual or attempted theft, sabotage, or diversion.

(c) *Personnel communications and data transmission.* For personnel and automated or electronic systems supporting the licensee's monitoring, detection, and assessment systems, licensees shall:

(1) Maintain continuous capability for personnel communication and electronic data transmission and processing among site security systems; and

(2) Provide an alternative communication capability for personnel, and an alternative data transmission and processing capability, in the event of a loss of the primary means of communication or data transmission and processing. Alternative communications and data transmission systems may not be subject to the same failure modes as the primary systems.

(d) *Response.* Licensees shall immediately respond to any actual or attempted unauthorized access to the security zones, or actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material at licensee facilities or temporary job sites. For any unauthorized access involving an actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material, the licensee's response shall include requesting, without delay, an armed response from the LLEA.

**§ 37.51 Maintenance, testing, and calibration.**

(a) Each licensee subject to this subpart shall implement a maintenance, testing, and calibration program to ensure that intrusion alarms, associated communication systems, and other physical components of the systems used to secure or detect unauthorized access to radioactive material are maintained in operable condition, are capable of performing their

intended function when needed, and are inspected and tested for operability and performance at intervals not to exceed 3 months.

(b) The licensee shall maintain records on the maintenance, testing, and calibration activities for 5 years.

**§ 37.53 Requirements for mobile devices.**

Each licensee that possesses mobile devices containing category 1 or category 2 quantities of radioactive material must:

(a) Have two independent physical controls to secure the material from unauthorized removal when the device is not under direct control and constant surveillance by the licensee; and

(b) For devices in or on a vehicle or trailer, utilize a method to disable the vehicle or trailer when not under direct control and constant surveillance by the licensee. Licensees shall not rely on the removal of an ignition key to meet this requirement.

**§ 37.55 Security program review.**

(a) Each licensee shall be responsible for the continuing effectiveness of the security program. Each licensee shall ensure that the security program is reviewed to confirm compliance with the requirements of this subpart and that comprehensive actions are taken to correct any noncompliance that is identified. The review must include the radioactive material security program content and implementation. Each licensee shall ensure that the security program is reviewed at a frequency not to exceed 12 months.

(b) The results of the review, along with any recommendations, must be documented. Each review report must identify conditions that are adverse to the proper performance of the security program, the cause of the condition(s), and, when appropriate, recommend corrective

actions, and corrective actions taken. The licensee shall review the findings and take any additional corrective actions necessary to preclude repetition of the condition, including reassessment of the deficient areas where indicated.

(c) The licensee shall maintain the review documentation for 5 years.

### **§ 37.57 Reporting of events.**

(a) The licensee shall immediately notify the LLEA after initiating an appropriate response to any actual or attempted theft, sabotage, or diversion of a category 1 or category 2 quantity of radioactive material. As soon as possible after initiating a response, but not at the expense of causing delay or interfering with the LLEA response to the event, the licensee shall notify the NRC Operations Center ((301) 816-5100). In no case shall the notification to the NRC be later than 4 hours after the discovery of any attempted or actual theft, sabotage, or diversion.

(b) The initial telephonic notification required by paragraph (a) of this section must be followed within a period of 30 days by a written report submitted to the NRC by an appropriate method listed in § 37.7. The report must include sufficient information for NRC analysis and evaluation, including identification of any necessary corrective actions to prevent future instances of such unauthorized access.

### **Subpart D – Physical Protection in Transit**

#### **§ 37.71 Additional requirements for transfer of category 1 and category 2 quantities of radioactive material.**

(a) Notwithstanding the requirements of any other regulation in this chapter, any licensee transferring category 1 quantities of radioactive material to a licensee of the

Commission or an Agreement State, prior to conducting such transfer, shall verify with the NRC's license verification system or the license issuing authority that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred and that the licensee is authorized to receive radioactive material at the address requested for delivery. The transferor shall document the verification.

(b) Notwithstanding the requirements of any other regulation in this chapter, any licensee transferring category 2 quantities of radioactive material to a licensee of the Commission or an Agreement State, prior to conducting such transfer, shall verify with the NRC's license verification system or the license issuing authority that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred. The transferor shall document the verification.

(c) The transferor shall keep a copy of the verification documentation as a record for 5 years.

**§ 37.73 Applicability of physical protection of category 1 and category 2 quantities of radioactive material during transit.**

(a) For shipments of category 1 quantities of radioactive material, each shipping licensee shall comply with the requirements for physical protection contained in §§ 37.75(a) and (c) through (e); 37.77; 37.79(a)(1), (b)(1), (c) and (d); and 37.81(a), (c), (e), (g) and (h).

(b) For shipments of category 2 quantities of radioactive material, each shipping licensee shall comply with the requirements for physical protection contained in §§ 37.75(b) through (e); 37.79(a)(2), (a)(3), (b)(2), and (d); and 37.81(b), (d), (f), (g), and (h). For those shipments of category 2 quantities of radioactive material that meet the criteria of § 71.97(b) of

this chapter, the shipping licensee shall also comply with the advance notification provisions of § 71.97 of this chapter.

(c) The shipping licensee shall be responsible for meeting the requirements of this subpart unless the receiving licensee has agreed in writing to arrange for the in-transit physical protection required under this subpart.

(d) Each licensee that imports category 1 quantities of radioactive material shall comply with the requirements for physical protection contained in §§ 37.75(a)(2) and (c) through (e); 37.77; 37.79(a)(1), (b)(1), (c), and (d); and 37.81(a), (c), (e), (g), and (h) during the domestic portion of the shipment.

(e) Each licensee that imports category 2 quantities of radioactive material shall comply with the requirements for physical protection during transit contained in §§ 37.75(c) through (e); 37.79(a)(2), (a)(3), (b)(2), and (d); and 37.81(b), (d), (f), (g), and (h) during the domestic portion of the shipment.

**§ 37.75 Preplanning and coordination of shipment of category 1 or category 2 quantities of radioactive material.**

(a) Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 1 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage shall:

(1) Preplan and coordinate shipment arrival, including the no-later-than arrival time, and departure times with the receiving licensee;

(2) Preplan and coordinate shipment information with the governor or the governor's designee of any State through which the shipment will pass to:

- (i) Ensure minimal delays;
- (ii) Discuss the State's intention to provide law enforcement escorts;
- (iii) Arrange for positional information sharing when requested;
- (iv) Identify Highway Route Control Quantity shipments (as the term "Highway Route Control Quantity" is defined in 49 CFR 173.403); and

(v) Identify safe havens; and

(3) Document the preplanning and coordination activities.

(b) Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 2 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage shall verify and document the shipment no-later-than arrival time and the actual shipment arrival with the receiving licensee. Verification may be made by e-mail, fax, or written documentation of a verbal conversation.

(c) Each licensee who receives a shipment of a category 1 or category 2 quantity of radioactive material shall notify the shipping licensee within 4 hours when the shipment arrives at its destination.

(d) Each licensee, who transports or plans to transport a shipment of a category 1 or category 2 quantity of radioactive material, and determines that the shipment will arrive after the no-later-than arrival time provided pursuant to paragraph (a)(1) of this section, shall promptly notify the receiving licensee of the new no-later-than arrival time.

(e) The licensee shall retain a copy of the documentation for preplanning and coordination and any revision thereof, as a record for 5 years.

**§ 37.77 Advance notification of shipment of category 1 quantities of radioactive material.**

As specified in paragraphs (a) and (b) of this section, each licensee shall provide advance notification to the NRC and the governor of a State, or the governor's designee, of the shipment of licensed material in a category 1 quantity, through or across the boundary of the State, before the transport, or delivery to a carrier for transport of the licensed material outside the confines of the licensee's facility or other place of use or storage. The contact information, including telephone and mailing addresses, of governors and governors' designees, is available on the NRC website at <http://nrc-stp.ornl.gov/special/designee.pdf>. A list of the contact information is also available upon request from the Director, Division of Intergovernmental Liaison and Rulemaking, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

(a) *Procedures for submitting advance notification.* (1) The notification must be made in writing to the office of each appropriate governor or governor's designee and to the NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

(2) A notification delivered by mail must be postmarked at least 7 days before transport of the shipment commences at the shipping facility.

(3) A notification delivered by any other means than mail must reach the office of the governor or the governor's designee at least 4 days before transport of a shipment within or through the State.

(b) *Information to be furnished in advance notification of shipment.* Each advance notification of shipment of category 1 quantities of radioactive material must contain the following information, if available at the time of notification:



(1) The name, address, and telephone number of the shipper, carrier, and receiver of the category 1 radioactive material;

(2) The license numbers of the shipper and receiver;

(3) A description of the radioactive material contained in the shipment, including the radionuclides and quantity;

(4) The point of origin of the shipment and the estimated time and date that shipment will commence;

(5) The estimated time and date that the shipment is expected to enter each State along the route;

(6) The estimated time and date of arrival of the shipment at the destination; and

(7) A point of contact, with a telephone number, for current shipment information.

(c) *Revision notice.*

(1) The licensee shall provide any information not previously available at the time of the initial notification, as soon as the information becomes available, to the governor of the State or the governor's designee and to the NRC's Director of Nuclear Security, Office of Nuclear Security and Incident Response.

(2) A licensee shall promptly notify the governor of the State or the governor's designee of any changes to the information provided in accordance with paragraphs (b) and (c)(1) of this section. The licensee shall also notify the NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response of any such changes.

(d) *Cancellation notice.* Each licensee who cancels a shipment for which advance notification has been sent shall send a cancellation notice to the governor of each State or to

the governor's designee previously notified and to the NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response. The licensee shall state in the notice that it is a cancellation and identify the advance notification that is being cancelled.

(e) *Records.* The licensee shall retain a copy of the advance notification and any revision and cancellation notices as a record for 5 years.

(f) *Protection of information.* State officials, State employees, and other individuals, whether or not licensees of the Commission or an Agreement State, who receive schedule information of the kind specified in § 37.77(b) shall protect that information against unauthorized disclosure as specified in § 73.21 of this chapter.

**§ 37.79 Requirements for physical protection of category 1 and category 2 quantities of radioactive material during shipment.**

(a) *Shipments by road.*

(1) Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 1 quantity of radioactive material shall:

(i) Ensure that movement control centers are established that maintain position information from a remote location. These control centers must monitor shipments 24 hours a day, 7 days a week, and have the ability to communicate immediately, in an emergency, with the appropriate law enforcement agencies.

(ii) Ensure that redundant communications are established that allow the transport to contact the escort vehicle (when used) and movement control center at all times. Redundant communications may not be subject to the same interference factors as the primary communication.

(iii) Ensure that shipments are continuously and actively monitored by a telemetric position monitoring system or an alternative tracking system reporting to a movement control center. A movement control center must provide positive confirmation of the location, status, and control over the shipment. The movement control center must be prepared to promptly implement preplanned procedures in response to deviations from the authorized route or a notification of actual, attempted, or suspicious activities related to the theft, loss, or diversion of a shipment. These procedures will include, but not be limited to, the identification of and contact information for the appropriate LLEA along the shipment route.

(iv) Provide an individual to accompany the driver for those highway shipments with a driving time period greater than the maximum number of allowable hours of service in a 24-hour duty day as established by the Department of Transportation Federal Motor Carrier Safety Administration. The accompanying individual may be another driver.

(2) Each licensee that transports category 2 quantities of radioactive material shall maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance.

(3) Each licensee who delivers to a carrier for transport, in a single shipment, a category 2 quantity of radioactive material shall:

(i) Use carriers that have established package tracking systems. An established package tracking system is a documented, proven, and reliable system routinely used to transport objects of value. In order for a package tracking system to maintain constant control and/or surveillance, the package tracking system must allow the shipper or transporter to identify when and where the package was last and when it should arrive at the next point of control.

(ii) Use carriers that maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance; and

(iii) Use carriers that have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

*(b) Shipments by rail.*

(1) Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 1 quantity of radioactive material shall:

(i) Ensure that rail shipments are monitored by a telemetric position monitoring system or an alternative tracking system reporting to the licensee, third-party, or railroad communications center. The communications center shall provide positive confirmation of the location of the shipment and its status. The communications center shall implement preplanned procedures in response to deviations from the authorized route or to a notification of actual, attempted, or suspicious activities related to the theft or diversion of a shipment. These procedures will include, but not be limited to, the identification of and contact information for the appropriate LLEA along the shipment route.

(ii) Implement an NRC-approved monitoring plan that is designed to prevent the use of the shipment for malevolent purposes while the shipment is in the classification yard.

(iii) Ensure that periodic reports to the communications center are made at preset intervals.

(2) Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 2 quantity of radioactive material shall:

(i) Use carriers that have established package tracking systems. An established package tracking system is a documented, proven, and reliable system routinely used to transport objects of value. In order for a package tracking system to maintain constant control and/or surveillance, the package tracking system must allow the shipper or transporter to identify when and where the package was last and when it should arrive at the next point of control.

(ii) Use carriers that maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance; and

(iii) Use carriers that have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

(c) *Procedures.*

(1) Each licensee who makes arrangements for the shipment of category 1 quantities of radioactive material shall develop written normal and contingency procedures to address:

(i) Notifications to the communication center and law enforcement agencies;

(ii) Communication protocols. Communication protocols must include a strategy for the use of authentication and duress codes and provisions for refueling or other stops, detours, and locations where communication is expected to be temporarily lost;

(iii) Loss of communications; and

(iv) Responses to an actual or attempted theft or diversion of a shipment, or any suspicious activities related to a shipment.

(2) Each licensee who makes arrangements for the shipment of category 1 quantities of radioactive material shall ensure that drivers, accompanying personnel, train crew, and movement control center personnel are appropriately trained in normal and contingency procedures.

(d) *Investigations.*

Each licensee who makes arrangements for the shipment of category 1 or category 2 quantities of radioactive material shall immediately conduct an investigation, in coordination with the receiving licensee, of any shipment that is lost or unaccounted for after the designated no-later-than arrival time in the advance notification.

**§ 37.81 Reporting of events.**

(a) The shipping licensee shall notify the appropriate LLEA and the NRC Operations Center ((301) 816-5100), within 1 hour of its determination that a shipment of category 1 quantities of radioactive material is lost or missing. The appropriate LLEA would be the law enforcement agency in the area of the shipment's last confirmed location. During the investigation required by 37.79(d), the shipping licensee will provide agreed upon updates to the NRC Operations Center on the status of the investigation.

(b) The shipping licensee shall notify the NRC Operations Center ((301) 816-5100) within 4 hours of its determination that a shipment of category 2 quantities of radioactive material is lost or missing. If, after 24 hours of its determination that the shipment is lost or missing, the radioactive material has not been located and secured, the licensee shall immediately notify the NRC Operations Center.

(c) The shipping licensee shall notify the designated LLEA along the shipment route, as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment or

suspicious activities related to the theft or diversion of a shipment of a category 1 quantity of radioactive material. As soon as possible after notifying the LLEA, the licensee shall notify the NRC Operations Center ((301) 816-5100) upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment of category 1 radioactive material.

(d) The shipping licensee shall notify the NRC Operations Center ((301) 816-5100), as soon as possible, upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment, of a category 2 quantity of radioactive material.

(e) The shipping licensee shall notify the NRC Operations Center ((301) 816-5100) and the LLEA as soon as possible upon recovery of any lost or missing category 1 quantities of radioactive material.

(f) The shipping licensee shall notify the NRC Operations Center ((301) 816-5100) ((301) 816-5100) as soon as possible upon recovery of any lost or missing category 2 quantities of radioactive material.

(g) The initial telephonic notification required by paragraphs (a) through (d) must be followed within a period of 30 days by a written report submitted to the NRC by an appropriate method listed in § 37.7. In addition, the licensee shall provide one copy of the written report addressed to the Director, Division of Security Policy, Office of Nuclear Security and Incident Response. The report must include sufficient information for NRC analysis and evaluation.

(h) Subsequent to filing the written report, the licensee shall also report any additional substantive information on the loss or theft within 30 days after the licensee learns of such information.

#### **Subpart E – [Reserved]**

## **Subpart F – Records**

### **§ 37.101 Form of records.**

Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform, provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

### **§ 37.103 Record retention.**

Licensees shall maintain the records that are required by the regulations in this part for the period specified by the appropriate regulation. If a retention period is not otherwise specified, these records must be retained until the Commission terminates the facility's license.

## **Subpart G – Enforcement**

### **§ 37.105 Inspections.**

(a) Each licensee shall afford to the Commission at all reasonable times opportunity to inspect category 1 or category 2 quantities of radioactive material and the premises and facilities wherein the nuclear material is used, produced, or stored.

(b) Each licensee shall make available to the Commission for inspection, upon reasonable notice, records kept by the licensee pertaining to its receipt, possession, use,



acquisition, import, export, or transfer of category 1 or category 2 quantities of radioactive material.

**§ 37.107 Violations.**

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of --

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of --

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended:

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under Section 186 of the Atomic Energy Act of 1954, as amended.

**§ 37.109 Criminal penalties.**

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 37 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 37 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 37.1, 37.3, 37.5, 37.7, 37.9, 37.11, 37.13, 37.107, and 37.109.

**Appendix A to Part 37—Category 1 and Category 2 Radioactive Materials**

Table 1 – Category 1 and Category 2 Threshold<sup>1</sup>

The terabecquerel (TBq) values are the regulatory standard. The curie (Ci) values specified are obtained by converting from the TBq value. The curie values are provided for practical usefulness only.

<b>Radioactive material</b>	<b>Category 1 (TBq)</b>	<b>Category 1 (Ci)</b>	<b>Category 2 (TBq)</b>	<b>Category 2 (Ci)</b>
Americium-241	60	1,620	0.6	16.2
Americium-241/Be	60	1,620	0.6	16.2
Californium-252	20	540	0.2	5.40
Cobalt-60	30	810	0.3	8.10
Curium-244	50	1,350	0.5	13.5
Cesium-137	100	2,700	1	27.0
Gadolinium-153	1,000	27,000	10	270
Iridium-192	80	2,160	0.8	21.6
Plutonium-238	60	1,620	0.6	16.2

Plutonium-239/Be	60	1,620	0.6	16.2
Promethium-147	40,000	1,080,000	400	10,800
Radium-226	40	1,080	0.4	10.8
Selenium-75	200	5,400	2	54.0
Strontium-90	1,000	27,000	10	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3	81.0

### <sup>1</sup>Calculations Concerning Multiple Sources or Multiple Radionuclides

The "sum of fractions" methodology for evaluating combinations of multiple sources or multiple radionuclides is to be used in determining whether a facility or activity meets or exceeds the threshold and is thus subject to the physical protection requirements of this part.

I. If multiple sources and/or multiple radionuclides are present in a facility or activity, the sum of the ratios of the activity of each of the radionuclides must be determined to verify the facility or activity is less than the category 1 or category 2 thresholds of Table 1, as appropriate. Otherwise, if the calculated sum of the ratio, using the following equation, is greater than or equal to 1.0, then the facility or activity meets or exceeds the thresholds of Table 1, and the applicable physical provisions of this part apply.

II. Use the equation below to calculate the sum of the ratios by inserting the actual activity of the applicable radionuclides from Table 1 or of the individual sources (of the same radionuclides from Table 1) in the numerator of the equation and the corresponding threshold activity from the Table 1 in the denominator of the equation. Calculations must be performed in metric values (i.e., TBq) and the numerator and denominator values must be in the same units.

$R_1$  = activity for radionuclides or source number 1

$R_2$  = activity for radionuclides or source number 2

$R_N$  = activity for radionuclides or source number n

$AR_1$  = activity threshold for radionuclides or source number 1

$AR_2$  = activity threshold for radionuclides or source number 2

$AR_N$  = activity threshold for radionuclides or source number n

$$\sum_1^n \left[ \frac{R_1}{AR_1} + \frac{R_2}{AR_2} + \frac{R_n}{AR_n} \right] \geq 1.0$$

## **PART 39 - LICENSES AND RADIATION SAFETY REQUIREMENTS FOR WELL LOGGING**

17. The authority citation for Part 39 continues to read as follows:

AUTHORITY: Secs. 53, 57, 62, 63, 65, 69, 81, 82, 161, 182, 183, 186, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2112, 2201, 2232, 2233, 2236, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note).

18. In § 39.1, paragraph (a) is revised to read as follows:

**§ 39.1 Purpose and scope.**

(a) This part prescribes requirements for the issuance of a license authorizing the use of licensed materials including sealed sources, radioactive tracers, radioactive markers, and uranium sinker bars in well logging in a single well. This part also prescribes radiation safety requirements for persons using licensed materials in these operations. The provisions and requirements of this part are in addition to, and not in substitution for, other requirements of this chapter. In particular, the provisions of parts 19, 20, 21, 30, 37, 40, 70, 71, and 150 of this chapter apply to applicants and licensees subject to this part.

\* \* \* \* \*

**PART 51 – ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC LICENSING AND RELATED REGULATORY FUNCTIONS**

19. The authority citation for Part 51 continues to read as follows:

AUTHORITY: Sec. 161, 68 Stat. 948, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953, (42 U.S.C. 2201, 2297f); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note). Subpart A also issued under National Environmental Policy Act of 1969, secs. 102, 104, 105, 83 Stat. 853-854, as amended (42 U.S.C. 4332, 4334, 4335); and Pub. L. 95-604, Title II, 92 Stat. 3033-3041; and sec. 193, Pub. L. 101-575, 104 Stat. 2835 (42 U.S.C. 2243). Sections 51.20, 51.30, 51.60, 51.80. and 51.97 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241, and sec. 148, Pub. L. 100-203, 101 Stat. 1330-223 (42 U.S.C. 10155, 10161, 10168). Section 51.22 also issued under sec. 274, 73 Stat. 688, as amended by 92 Stat. 3036-3038 (42 U.S.C. 2021) and under Nuclear Waste Policy Act of 1982, sec. 121, 96 Stat. 2228 (42 U.S.C. 10141). Sections 51.43, 51.67, and 51.109 also issued under Nuclear Waste Policy Act of 1982, sec. 114(f), 96 Stat. 2216, as amended (42 U.S.C. 10134(f)).

20. In § 51.22, the introductory text in paragraph (c)(3) is revised to read as follows:

**§ 51.22 Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review.**

\* \* \* \* \*

(c)\*\*\*

(3) Amendments to parts 20, 30, 31, 32, 33, 34, 35, 37, 39, 40, 50, 51, 52, 54, 60, 61, 63, 70, 71, 72, 73, 74, 81, and 100 of this chapter which relate to—

\* \* \* \* \*

## **PART 71--PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL**

21. The authority citation for part 71 continues to read as follows:

AUTHORITY: Secs. 53, 57, 62, 63, 81, 161, 182, 183, 68 Stat. 930, 932, 933, 935, 948, 953, 954, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 2073, 2077, 2092, 2093, 2111, 2201, 2232, 2233, 2297f); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005).  
Section 71.97 also issued under sec. 301, Pub. L. 96-295, 94 Stat. 789-790.

22. In § 71.97, the introductory text of paragraph (b) is revised to read as follows:

### **§ 71.97 Advance notification of shipment of irradiated reactor fuel and nuclear waste.**

(a) \*\*\*

(b) Advance notification is also required under this section for the shipment of licensed material, other than irradiated fuel, meeting the following three conditions:

\* \* \* \* \*

## **PART 73—PHYSICAL PROTECTION OF PLANTS AND MATERIALS**

23. The authority citation for part 73 continues to read as follows:

AUTHORITY: Secs. 53, 161, 149, 68 Stat. 930, 948, as amended, sec. 147, 94 Stat. 780 (42 U.S.C. 2073, 2167, 2169, 2201); sec. 201, as amended, 204, 88 Stat. 1242, as

amended, 1245, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 5841, 5844, 2297f); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. 109–58, 119 Stat. 594 (2005).

Section 73.1 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42.U.S.C. 10155, 10161). Section 73.37(f) also issued under sec. 301, Pub. L. 96–295, 94 Stat. 789 (42 U.S.C. 5841 note). Section 73.57 is issued under sec. 606, Pub. L. 99-399, 100 Stat. 876(42 U.S.C. 2169)

24. A new § 73.35 is added to read as follows:

**§ 73.35 Requirements for physical protection of irradiated reactor fuel (100 grams or less) in transit.**

Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a quantity of irradiated reactor fuel weighing 100 grams (0.22 pounds) or less in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, which has a total external radiation dose rate in excess of 1 sievert (100 rem) per hour at a distance of 0.91 meters (3 feet) from any accessible surface without intervening shielding, shall follow the physical protection requirements for category 1 quantities of radioactive material in Subpart D of Part 37 of this chapter.

Dated at Rockville, Maryland, this     day of                     , 2010.

For the Nuclear Regulatory Commission.

Annette Vietti-Cook,  
Secretary of the Commission.

**Note:** This Appendix Will Not Appear in the Code of Federal Regulations.

**APPENDIX A TO THIS PROPOSED RULE -- REGULATORY FLEXIBILITY ANALYSIS FOR THE PROPOSED AMENDMENTS TO 10 CFR PARTS 30, 32, 33, 34, 35, 36, 37, 39, 51, 71, 73, AND 150 (PHYSICAL PROTECTION OF BYPRODUCT MATERIAL)**

I. Background.

The Regulatory Flexibility Act (RFA), as amended 5 U.S.C. 601 *et seq.*, requires that agencies consider the impact of their rulemakings on small entities and, consistent with applicable statutes, consider alternatives to minimize these impacts on the businesses, organizations, and government jurisdictions to which they apply.

The NRC has established standards for determining which NRC licensees qualify as small entities (10 CFR 2.810). These size standards were based on the Small Business Administration's most common receipts-based size standards and include a size standard for business concerns that are manufacturing entities.

Description of the reasons that action by the agency is being considered.

The NRC has long participated in efforts to address radioactive source protection and security. However, the terrorist attacks of September 11, 2001, heightened concerns about the use of risk-significant radioactive materials in a malevolent act. Such an attack is of particular concern because of the widespread use of radioactive materials in the United States by industrial, medical, and academic institutions. The theft or diversion of risk-significant radioactive materials could lead to their malicious use in a radiological dispersal device or a radiological exposure device.



Commission regulations provide requirements for the safe use, transit, and control of licensed material. A licensee's loss of control of risk-significant radioactive material, whether it is inadvertent or through a deliberate act, could result in significant adverse impacts that could reasonably constitute a threat to the public health and safety or the common defense and security of the United States. After the attacks of September 11, 2001, the Commission determined that certain licensed material should be subject to enhanced security provisions and safeguarded during transport, and that individuals with unescorted access to risk-significant radioactive material should be subject to background investigations. For additional information see the Discussion portion of the Statements of Consideration (SOC).

Succinct statement of the objectives of, and legal basis for, the proposed rule.

The regulatory objective of this rulemaking is to establish generically applicable security requirements similar to those previously imposed by the NRC orders. Although an order is legally binding on the licensee receiving the order, a rule makes the requirements generally applicable to all affected licensees. In addition, notice and comment rulemaking is an open process that allows for public participation. This proposed rulemaking would place security requirements for category 1 and category 2 quantities of radioactive material into the regulations. In developing the proposed rule, the NRC considered, among other things, the various security orders, lessons-learned during implementation, the recommendations from the Independent Review Panel and the Materials Working Group, and stakeholder comments. The proposed rule also considered a petition for rulemaking submitted by the State of Washington. For additional information see the Discussion portion of the SOC. The authority citation sections of the proposed rule contain the statutory authority for the proposed rule.

Description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply.

The proposed rule would affect about 400 NRC licensees and about 1000 Agreement State licensees. This includes a wide range of licensees, including pool-type irradiator licensees; manufacturer and distributor licensees; medical facilities with gamma knife devices; self-shielded irradiator licensees (including blood irradiators); teletherapy unit licensees; radiographers; well loggers; broad scope users; radioisotope thermoelectric generator licensees; and licensees that ship or prepare for shipment category 1 or category 2 quantities of radioactive material. Some of these licensees would be considered small entities. In fiscal year 2008, about 26 percent of materials licensees qualified as small entities. Using the same percentage, 364 of the licensees that would be affected by the proposed rule would be considered small entities.

Description of the projected reporting, recordkeeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities that will be subject to the requirements, and the type of professional skills necessary for preparation of reports and records.

Licensees would be required to: (1) develop procedures for implementation of the security provisions; (2) develop a security plan that describes how security is being implemented; (3) conduct training on the procedures and security plan; (4) conduct background investigations for those individuals permitted access to category 1 or category 2 quantities of radioactive material; (5) coordinate with LLEAs so the LLEAs would be better prepared to respond in an emergency; (6) conduct preplanning and coordination activities before shipping radioactive material; and (7) implement security measures for the protection of the radioactive material. Licensees would be required to promptly report any attempted or actual theft or

diversion of the radioactive material. Licensees would be required to keep copies of the security plan, procedures, background investigation records, training records, and documentation that certain activities have occurred. For additional information on the requirements, see the SOC or the proposed rule text. No special skills are necessary for the preparation of reports or records.

The average licensee would have a one-time cost of approximately \$27,000 and an annual cost of approximately \$25,700 to fully implement the proposed rule. Much of this cost would result from the requirements to have procedures, conduct training, and to develop a security plan. Although not required by the various security orders, many licensees have already developed procedures and conducted training and may only require minor revisions; therefore, the actual cost for some licensees may be lower. Additional large costs are the weekly physical check of the category 2 sources and the annual program review. The NRC views that the weekly check is a vital part of the security program, particularly for materials that are used infrequently. The program review is important for licensees to review the effectiveness of the program and to ensure that requirements are being implemented. More information on the cost of the proposed rule is contained in the Regulatory Analysis.

Identification, to the extent practicable, of all relevant Federal rules that may duplicate, overlap or conflict with the proposed rule.

Several U.S. Government programs involve fingerprinting and an FBI identification and criminal history records check. These include the National Agency Check; Transportation Worker Identification Credentials in accordance with 49 CFR 1572; Bureau of Alcohol, Tobacco, Firearms, and Explosives background check and clearances in accordance with 27 CFR 555; Health and Human Services security risk assessments for possession and use of

select agents and toxins in accordance with 42 CFR 73; Hazardous Material security threat assessment for hazardous material endorsement to commercial drivers license in accordance with 49 CFR 1572; and Customs and Border Patrol's Free and Secure Trade Program. Any individual that has favorably undergone the background investigation required by these programs would be relieved from the background investigation elements of the proposed rule as long as the licensee has appropriate documentation. Any individual who has an active Federal security clearance would also be relieved assuming appropriate documentation is provided.

The Department of Transportation requires security plans for the transport of highway route control quantities of radioactive material in accordance with 49 CFR 172.800. This provision covers only a small portion of the category 1 and category 2 quantities of radioactive material covered by the proposed rule.

The NRC is not aware of any other relevant Federal rules that may duplicate, overlap, or conflict with the proposed rule.

Description of any significant alternatives to the proposed rule that accomplish the stated objectives of applicable statutes and that minimize any significant economic impact of the proposed rule on small entities, including alternatives considered, such as: (1) establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) clarification, consolidation, or simplification of compliance and reporting requirements under the rule for small entities; (3) use of performance rather than design standards; and (4) any exemption from coverage of the rule, or any part thereof, for such small entities.

As noted earlier, some of the licensees that would be impacted by the proposed rule are small businesses. The proposed rule would impose the minimum requirements that the NRC

believes is necessary to adequately protect the public health and safety and the common defense and security. Therefore, the NRC could not grant relief to small entities to allow them to implement less effective measures. The proposed rule would provide some flexibility in the particular measures that a licensee could choose to employ. Licensees affected by the proposed rule have already implemented the bulk of the requirements in response to various security orders.

Draft Compatibility Table for Proposed Rule

Section	Change	Subject	Compatibility	
			Existing	New
Part 30				
30.6	Amend	Communications	D	D
30.13	Amend	Carriers	B	B
30.32(l)	New	Application of specific licenses	-	C
30.33(a)(4)	Amend	General requirements for issuance of specific licenses	D	D
Part 32				
32.1(b)	Amend	Purpose and scope	D	D
Part 33				
33.1	Amend	Purpose and scope	D	D
Part 34				
34.1	Amend	Purpose and scope	D	D
Part 35				
35.1	Amend	Purpose and scope	D	D
Part 36				
36.1	Amend	Purpose and scope	D	D
Part 37				
37.1	New	Purpose	-	D
37.3	New	Scope	-	D
37.5	New	Definition Access control	-	C
37.5	New	Definition Act	-	D
37.5	New	Definition Aggregated	-	C
37.5	New	Definition Agreement State	-	[B]
37.5	New	Definition Approved individual	-	B
37.5	New	Definition Background Investigation	-	C
37.5	New	Definition Becquerel	-	[A]
37.5	New	Definition Byproduct Material	-	[H&S]
37.5	New	Definition Category 1 quantities of radioactive material	-	B
37.5	New	Definition Category 2 quantities of radioactive material	-	B
37.5	New	Definition Commission	-	D
37.5	New	Definition Curie	-	[A]
37.5	New	Definition Diversion	-	C
37.5	New	Definition Escorted access	-	B
37.5	New	Definition Fingerprint Orders	-	C
37.5	New	Definition Government agency	-	D
37.5	New	Definition Isolation	-	C
37.5	New	Definition License	-	D
37.5	New	Definition License issuing agency	-	D
37.5	New	Definition Local law enforcement agency	-	C
37.5	New	Definition Lost or missing material	-	[B]

Section	Change	Subject	Compatibility	
			Existing	New
37.5	New	Definition Mobile device	-	B
37.5	New	Definition Movement control center	-	B
37.5	New	Definition No-later-than arrival time	-	B
37.5	New	Definition Person	-	[C]
37.5	New	Definition Reviewing official	-	C
37.5	New	Definition Sabotage	-	C
37.5	New	Definition Safe haven	-	B
37.5	New	Definition Security zone	-	C
37.5	New	Definition State	-	D
37.5	New	Definition Telemetric position monitoring system	-	B
37.5	New	Definition Temporary job site	-	B
37.5	New	Definition Trustworthiness and reliability	-	B
37.5	New	Definition Unescorted access	-	B
37.5	New	Definition United States	-	D
37.7	New	Communications	-	D
37.9	New	Interpretations	-	D
37.11(a)	New	Specific exemptions	-	D
37.11(b)	New	Specific exemptions	-	NRC
37.13	New	Information collection requirements: OMB approval	-	D
37.21(a)(1),(a)(2)	New	General	-	D
37.21(a)(3),(a)(4)	New	General	-	C
37.21(b)	New	General performance objective	-	B
37.21(c)	New	Applicability	-	B
37.23(a)	New	Granting unescorted access authorization	-	B
37.23(b)	New	Reviewing officials	-	B
37.23(c)	New	Informed consent	-	B
37.23(d)	New	Personal history disclosure	-	B
37.23(e)	New	Determination basis	-	B
37.23(f)	New	Procedures	-	C
37.23(g)	New	Right to correct and complete information	-	B
37.23(h)	New	Records	-	C
37.25(a)	New	Initial investigation	-	B
37.25(b)	New	Grandfathering	-	C
37.25(c)	New	Reinvestigations	-	B
37.27(a)	New	General performance objective and requirements	-	B
37.27(b)	New	Prohibitions	-	B
37.27(c)	New	Procedures for processing fingerprint checks	-	B

Section	Change	Subject	Compatibility	
			Existing	New
37.29	New	Relief from fingerprinting, identification, and criminal history records checks and other elements of a background investigations for designated categories of individuals permitted unescorted access to certain radioactive materials or other property	-	B
37.31(a)-(d)	New	Protection of information	-	B
37.31(e)	New	Protection of information		C
37.33(a), (b), (c)	New	Access authorization program review	-	C
37.41(a)	New	Applicability	-	B
37.41(b)	New	General performance objective	-	B
37.41(c)	New	Program features	-	C
37.41(d)	New	Information submittal and notification	-	C
37.43(a)	New	Security plan	-	B
37.43(b)	New	Implementing procedures	-	C
37.43(c)(1) – (c)(3)	New	Training	-	B
37.43(c)(4)	New	Training		C
37.43(d)(1) – (d)(7)	New	Protection of Information	-	C
37.43(d)(8)	New	Protection of Information		NRC
37.45(a)	New	LLEA coordination	-	B
37.45b)	New	LLEA notification for temporary job sites	-	B
37.45(c)	New	Records	-	C
37.47(a)-(d)	New	Security Zones	-	B
37.49(a)	New	Monitoring and detection	-	B
37.49(b)	New	Assessment	-	B
37.49(c)	New	Personnel communications and data transmission	-	B
37.49(d)	New	Response	-	B
37.51	New	Maintenance, testing, and calibration	-	C
37.53	New	Requirements for mobile devices	-	B
37.55(a), (b), (c)	New	Security program review	-	C
37.57(a)	New	Reporting of events	-	C
37.57(b)	New	Reporting of events		C
37.71	New	Additional requirements for transfer of category 1 quantities of radioactive material	-	B



Section	Change	Subject	Compatibility	
			Existing	New
37.73(a), (b), (d), (e)	New	Applicability of physical protection of category 1 and category 2 quantities of radioactive material during transit	-	D
37.73(c)	New	Applicability of physical protection of category 1 and category 2 quantities of radioactive material during transit	-	B
37.75(a) – (d)	New	Preplanning and coordination of shipment of category 1 or category 2 quantities of radioactive material	-	B
37.75(e)	New	Preplanning and coordination of shipment of category 1 or category 2 quantities of radioactive material	-	C
37.77	New	Advance notification for shipments of category 1 quantities of radioactive material	-	B
37.77(a)	New	Procedures for submitting advance notification	-	B
37.77(b)	New	Information to be furnished in advance notification of shipment	-	B
37.77(c)	New	Revision notice	-	B
37.77(d)	New	Cancellation notice	-	B
37.77(e)	New	Records	-	C
37.77(f)	New	Protection of information	-	NRC
37.79(a)	New	Shipments by road	-	B
37.79(b)	New	Shipments by rail	-	B
37.79(c)	New	Procedures	-	B
37.79(d)	New	Investigations	-	B
37.81(a)	New	Reporting of events	-	B
37.81(b)	New	Reporting of events	-	B
37.81(c)	New	Reporting of events	-	B
37.81(d)	New	Reporting of events	-	B
37.81(e)	New	Reporting of events	-	B
37.81(f)	New	Reporting of events	-	B
37.81(g)	New	Reporting of events	-	C
37.81(h)	New	Reporting of events	-	C
37.101	New	Form of records	-	C
37.103	New	Record retention	-	C
37.105	New	Inspections	-	D
37.107	New	Violations	-	D
37.109	New	Criminal penalties	-	D
Appendix A	New	Category 1 and 2 threshold limits	-	B
Part 39				
39.1	Amend	Purpose and scope	D	D
Part 51				

Section	Change	Subject	Compatibility	
			Existing	New
51.22(c)(3)	Amend	Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review	NRC	NRC
Part 71				
71.97(b)	Amend	Advance notification of shipment of irradiated reactor fuel and nuclear waste	B	B
Part 73				
71.35	New	Requirements for physical protection of irradiated reactor fuel (100 grams or less) in transit	-	NRC

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**Draft Regulatory Analysis for Proposed Rule:  
Physical Protection of Byproduct Material  
(10 CFR Parts 30, 32, 33, 34, 35, 36, 37, 39, 51, 71, and  
73)**

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**U.S. Nuclear Regulatory Commission  
November 2009**



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## ACRONYMS AND ABBREVIATIONS

AEA	Atomic Energy Act
CFR	Code of Federal Regulations
DOT	Department of Transportation
FBI	Federal Bureau of Investigation
FR	<i>Federal Register</i>
GPS	global positioning satellite
HRCQ	highway route control quantities
IAEA	International Atomic Energy Agency
LLEA	local law enforcement agency
M&D	manufacturer and distributor
NRC	Nuclear Regulatory Commission
RDD	radiological dispersal device
RED	radiological exposure device
SGI	safeguards information
SGI-M	safeguards information – modified handling

## **1. Introduction**

This document presents a regulatory analysis of the proposed security requirements for use of category 1 and category 2 quantities of radioactive material. The U.S. Nuclear Regulatory Commission (NRC) is proposing to establish a new part 37 in Title 10 of the Code of Federal Regulations (CFR), which will contain the physical protection requirements for certain byproduct material (category 1 and category 2 quantities of radioactive material). This introduction is divided into three sections. Section 1.1 states the problem and the reasons for the proposed rulemaking. Section 1.2 provides background information. Section 1.3 discusses the regulatory objectives of the proposed rule.

### **1.1 Statement of the Problem and Reasons for Rulemaking**

The NRC has long participated in efforts to address radioactive source protection and security. The terrorist attacks of September 11, 2001, however, heightened concerns about the use of risk-significant radioactive materials in a malevolent act. Such an attack is of particular concern because of the widespread use of radioactive materials in the United States by industrial, medical, and academic institutions. The theft or diversion of risk-significant radioactive materials could lead to their unauthorized use in a radiological dispersal device (RDD) or a radiological exposure device (RED).

Commission regulations provide requirements for the safe use, transit, and control of licensed material. A licensee's loss of control of risk-significant radioactive material, whether it is inadvertent or through a deliberate act, has the potential to result in significant adverse impacts that could reasonably constitute a threat to the public health and safety or the common defense and security of the United States. After the attacks of September 11, 2001, the Commission determined that certain licensed material should be subject to enhanced security provisions and safeguarded during transport, and that individuals with unescorted access to risk-significant radioactive material should be subject to background investigations. The NRC issued several orders to licensees that possessed category 1 and category 2 quantities of radioactive material. In general, the orders provided for enhanced security measures for such things as license verification before transfer, intrusion detection and response, use of security zones, access control, and coordination with local law enforcement authorities (LLEAs). The orders also contain requirements for the licensee to determine the trustworthiness and reliability of individuals permitted unescorted access to category 1 or category 2 quantities of radioactive material through fingerprinting and criminal history checks and other elements of a background investigation. The orders also provided additional security measures during transportation such as preplanning and coordinating shipments, advance notification of shipments, and control and monitoring of shipments.

Although a security order is legally binding on the licensee receiving the order, a rule makes requirements generally applicable to all licensees. In addition, notice and comment rulemaking allows for public participation and is an open process. This proposed rulemaking would place the security requirements for use of category 1 and category 2 quantities of radioactive material into the regulations. In developing the proposed rule the staff considered the various security orders, lessons-learned during implementation, the recommendations of the Independent External Review Panel and the Materials Program Working Group, and stakeholder comments on the preliminary rule language. The proposed rule also considers a petition for rulemaking

submitted by the State of Washington that requested that the NRC adopt the use of global positioning satellite (GPS) tracking as a national requirement for vehicles transporting highly radioactive mobile or portable radioactive devices.

## **1.2 Background**

### 1.2.1 Current Regulatory Framework

NRC regulations in 10 CFR 20.1801, "Security of Stored Material," and 10 CFR 20.1802, "Control of material not in storage," require licensees to: (1) secure, from unauthorized removal or access, licensed materials that are stored in controlled or unrestricted areas; and (2) to control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage. NRC regulations in 10 CFR 20.2201, "Reports of theft or loss of licensed material," require licensees to report lost, stolen, or missing radioactive material. Further, throughout the NRC's regulations for licensing byproduct material, there are educational and training requirements to ensure that individuals with access to radioactive materials have adequate knowledge and skills to safely use the radioactive material as intended. These requirements, along with other safety regulations, were primarily intended to provide reasonable assurance for preventing and mitigating unintended exposure to radiation exceeding the applicable limits in 10 CFR Part 20, "Standards for Protection Against Radiation."

NRC regulations in 10 CFR Part 71, "Packaging and Transportation of Radioactive Material," put in place requirements for packages used to transport radioactive material. NRC regulations in 10 CFR 20.2207, "Reports of transactions involving nationally tracked sources," require licensees to report to the National Source Tracking System the manufacture, transfer, receipt, disassembly or disposal of a nationally tracked source. NRC regulations in 10 CFR 71.97, "Advance notification of shipment of irradiated reactor fuel and nuclear waste," require licensees to notify in advance the Governor of a State, or the Governor's designee, about shipments of highway route controlled quantities (HRCQ) of radioactive waste passing through the boundaries of the State. Further, NRC regulations in 10 CFR 71.5, "Transportation of licensed material," specifically require licensees transporting licensed material to comply with applicable regulations put in place by the U.S. Department of Transportation (DOT). These requirements, along with other safety regulations, were primarily intended to provide reasonable assurance for preventing and mitigating unintended radiation exposure of licensee personnel, workers involved in carriage and the general public during the transport of such materials.

The current regulations only require a licensee to report lost, stolen, or missing material to the NRC, or the appropriate Agreement State, after it discovers the event has occurred. Usually, this would be the next time the licensee went to use the material and finds it gone. In some cases, months could elapse between uses; which is ample time for a terrorist to carry out a significant malevolent act. Nowhere do the regulations designate how quickly a licensee must discover that its radioactive material is stolen or missing. For situations involving theft of material, the local police force needs to be called quickly so it can interdict the adversaries or take appropriate protective measures to mitigate severe radiological consequences to the public.

If the loss, theft, or misplacement of materials takes place during transport, this report would occur when the material has not arrived at its destination. In some cases, hours or days could

elapse before anyone notices that the shipment did not arrive and begins searching for it, which could be ample time for a terrorist to carry out a significant malevolent act. Currently, the regulations do not designate how quickly a licensee must identify that its radioactive material is lost or stolen during transport. Prompt reporting to the NRC or to an Agreement State of radioactive material lost during transport may be appropriate for ensuring that resources are in place to help find and secure the material, thereby protecting the public from possible exposure. The NRC regulations provide reasonable assurance that the radioactive material will be transported in a safe manner and that the public will be protected from radiological exposure under normal conditions of transport and during transportation accidents. However, for situations involving the theft of material during transport, the local law enforcement agency and Federal Bureau of Investigation (FBI) should be called quickly so that they can interdict the adversaries and recover the material or take appropriate measures to mitigate radiological consequences to the public.

The regulations do not have provisions to provide reasonable assurance that individuals having access to the radioactive material are trustworthy and reliable to use the radioactive material as intended or will not aid or abet those who might attempt to steal or divert the radioactive material.

### 1.2.2 Commission Orders

The NRC imposed a series of security orders on licensees that were authorized to possess category 1 or category 2 quantities of radioactive material. The security orders were issued using a graded approach, based on the relative risk and quantity of material possessed by the licensee. The NRC issued the first series of orders to panoramic and underwater irradiator licensees that possessed more than 370 Terabecquerels (10,000 Curies) of radioactive materials (EA-02-249; June 6, 2003) (68 FR 35458; June 13, 2003). The next series of orders were issued to manufacturing and distribution licensees (EA-03-225; January 12, 2004) (69 FR 5375; February 4, 2004). These orders require the implementation of additional security measures and the protection of the licensee's physical protection information as Safeguards Information – Modified Handling (SGI-M). The orders are not publicly available because they contain detailed security requirements that are designated as SGI-M. These orders were issued to both NRC and Agreement State licensees under the NRC's authority to protect the common defense and security.

Subsequently, the NRC issued Increased Control Orders (EA-05-090; November 14, 2005) (70 FR 72128; December 1, 2005) to other licensees authorized to possess category 1 and category 2 quantities of risk-significant radioactive material. The Increased Control Orders are available on our public website at <http://www.nrc.gov/security/byproduct/orders.html>. These orders were issued under the NRC's authority to protect public health and safety and require licensees to implement enhanced security measures known as Increased Controls. To effect nationwide implementation, each Agreement State issued legally binding requirements to licensees under their regulatory jurisdiction.

These security orders specifically addressed the security of byproduct material possessed in quantities greater than or equal to category 2. The category 1 and category 2 thresholds are



based on the International Atomic Energy Agency (IAEA) Code of Conduct.<sup>1</sup> These additional security measures provided for enhanced security measures for such things as license verification before transfer, intrusion detection and response, use of security zones for some licensees, access control, and coordination with LLEA. The orders also contained requirements for the licensee to determine the trustworthiness and reliability of individuals permitted unescorted access to risk-significant radioactive materials. The determination involved a background investigation of the individual. The background investigations were limited to local criminal history records checks with law enforcement agencies, verification of employment history, education, personal references, and confirmation of employment eligibility (legal immigration status).

During the same time period, efforts were underway to enhance transportation security of category 1 and category 2 quantities of radioactive material. In 2005, the NRC issued two sets of orders to licensees transporting radioactive material in quantities of concern. The first set of transportation security orders was issued to licensees that might be expected to transport category 1 quantities of radioactive material (EA-05-006; July 19, 2005) (70 FR 44407; August 2, 2005). The orders require the implementation of additional security measures and the protection of the licensee's physical protection information as SGI-M and are not publicly available. These orders were issued to both NRC and Agreement State licensees under the NRC's authority to protect the common defense and security. The second set of orders was the Increased Control Orders mentioned above which also contain requirements for transporting category 2 quantities of radioactive material.

These security orders specifically addressed the transportation security of category 1 and category 2 quantities of radioactive material. The orders required enhanced security measures during transportation, including enhanced security in preplanning and coordinating shipments, advance notification of shipments to the NRC and States through which the shipment will pass, control and monitoring of shipments that are underway, trustworthiness and reliability of personnel, information security considerations, and control of mobile or portable devices.

In 2005, Congress passed, and the President signed, the Energy Policy Act of 2005 (EPAAct). The EPAAct amended Section 149 of the Atomic Energy Act (AEA) to authorize the Commission to require the fingerprinting of any individual who is permitted unescorted access to radioactive material or other property subject to regulation by the Commission that the Commission determines to be of such significance to the public health and safety or the common defense and security as to warrant fingerprinting and background checks. Under this new authority, the Commission determined that individuals with access to category 1 and category 2 quantities of radioactive material warrant fingerprinting and background checks.

On October 17, 2006, the NRC issued orders to panoramic and underwater irradiator licensees (EA-06-248) (71 FR 63043; October 27, 2006), M&D licensees (EA-06-250) (71 FR 53046; October 27, 2006), and licensees making shipments of category 1 quantities of radioactive material (EA-06-249) (71 FR 62302; October 24, 2006) to require fingerprinting and FBI criminal history records checks for unescorted access to risk-significant quantities of radioactive material at their facilities. In issuing these orders, NRC noted that a deliberate malevolent act

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<sup>1</sup> International Atomic Energy Agency Code of Conduct on the Safety and Security of Radioactive Sources, IAEA, Vienna, 2004.

by an individual with unescorted access to these materials has a potential to result in significant adverse impacts to the public health and safety or the common defense and security and, thus, necessitates expeditious implementation of additional fingerprint requirements. The orders were issued to both NRC and Agreement State licensees under the NRC's authority to protect the common defense and security. On December 5, 2007, the NRC issued orders to all other NRC licensees who were authorized to possess category 1 or category 2 quantities of radioactive material (EA-07-305) (72 FR 70901; December 13, 2007). These orders were issued under the NRC's authority to protect the public health and safety. To effect nationwide implementation, each Agreement State issued legally binding requirements to licensees under their regulatory jurisdiction.

### **1.3 Regulatory Objectives**

The objective of this proposed rule is to provide reasonable assurance of preventing the theft or diversion of category 1 and category 2 quantities of radioactive material by establishing generally applicable security requirements similar to those previously imposed by the NRC orders. Although a security order is legally binding on the licensee receiving the order, a rule makes requirements generally applicable to all licensees. In addition, notice and comment rulemaking allows for public participation and is an open process. This proposed rulemaking would place the security requirements for use of category 1 and category 2 quantities of radioactive material into the regulations. In developing the proposed rule the staff considered the various security orders, lessons-learned during implementation, the recommendations of the Independent External Review Panel and the Materials Program Working Group, and stakeholder comments on the preliminary rule language. In addition a petition for rulemaking filed by the State of Washington was considered during the development of the proposed rule.

## **2. Identification and Preliminary Analysis of Alternative Approaches**

This section presents preliminary analysis of the alternatives that the staff considered to meet the regulatory goals identified in the previous section. The NRC considered three alternatives for the proposed rule as discussed below.

### **2.1 Option 1: No Action**

Option 1 is the no-action alternative. Under the no-action alternative, the Commission would make no changes to the current regulations. Licensees would continue to comply with the Commission's security orders. This alternative would avoid certain costs that the rule would impose. However, taking no action would not address the lessons-learned, and orders would need to be issued to new licensees and licensees that amend their licenses to increase their possession limit. The NRC's regulations would be out of date and would not reflect current Commission policy for the minimum requirements that the Commission deems necessary to ensure the adequate protection of public health and safety and the common defense and security.

## **2.2 Option 2: Amend the Regulations to Enhance Security (Possession Base)**

Under Option 2, NRC would conduct a rulemaking to include security measures for use of category 1 and category 2 quantities of radioactive material. This would involve creating a new Part 37 that would contain the security measures for use of category 1 and category 2 quantities of radioactive material. Conforming changes would be made to Parts 30, 32, 33, 34, 35, 36, 39, 51, 71, and 73. The rule would apply to licensees that possess byproduct material in category 1 or category 2 quantities. Licensees that allow unescorted access to category 1 and category 2 quantities of radioactive material would need to develop and implement an access authorization program. Any licensee that is authorized to possess category 1 or category 2 quantities of radioactive material would need to develop a security program. Only those licensees that aggregate the radioactive material at the category 1 or category 2 level would be required to implement the security program and employ the security measures. Any licensee that ships category 1 or category 2 quantities of radioactive material or small quantities of irradiated reactor fuel would be subject to the transportation security provisions.

A comprehensive rulemaking would provide a means of addressing the issues and concerns associated with the physical protection of category 1 and category 2 quantities of radioactive material. Through a comprehensive revision, the NRC could ensure that all licensees that possess category 1 and category 2 quantities of radioactive material would be subject to uniform regulatory requirements in order to consistently implement measures to enhance security and safety.

The NRC has estimated the benefits and costs of this option, as described in Sections 3 and 4 of this regulatory analysis, and has pursued Option 2 for the reasons discussed in Section 5.

## **2.3 Option 3: Amend the Regulations to Enhance Security (Authorization Base)**

Under Option 3, NRC would conduct a rulemaking to include security measures for use of category 1 and category 2 quantities of radioactive material. This would involve creating a new Part 37 that would contain the security measures for use of category 1 and category 2 quantities of radioactive material. Conforming changes would be made to Parts 30, 32, 33, 34, 35, 36, 39, 51, 71, and 73. The rule would apply to licensees that are authorized to possess byproduct material that equals or exceeds the category 2 thresholds. This approach would impact more licensees than option 2. Any licensee authorized to possess category 1 or category 2 quantities of radioactive material would be required to develop and implement an access authorization program and a security program. Any licensee that ships category 1 or category 2 quantities of radioactive material or small quantities of irradiated reactor fuel would be subject to the transportation security provisions.

A comprehensive rulemaking would provide a means of addressing the issues and concerns associated with the physical protection of category 1 and category 2 quantities of radioactive material. Through a comprehensive revision, the NRC could ensure that all licensees that are authorized to possess category 1 or category 2 quantities of radioactive material would be subject to uniform regulatory requirements in order to consistently implement measures to enhance security and safety.

The NRC has estimated the benefits and costs of this option, as described in Sections 3 and 4 of this regulatory analysis.

### **3. Evaluation of Benefits and Costs**

This section examines the benefits and costs expected to result from the three options. The information is presented in three subsections. Section 3.1 identifies the attributes that are expected to be affected by the rulemaking. Section 3.2 describes how the benefits and costs have been analyzed for the main analysis. Section 3.3 describes how the benefits and costs have been analyzed for the pre-order analysis.

#### **3.1 Identification of Affected Attributes**

This section identifies the factors within the public and private sectors that the regulatory alternatives (discussed in Section 2) are expected to affect. These factors are classified as "attributes" using the list of potential attributes provided by NRC in Chapter 5 of its *Regulatory Analysis Technical Evaluation Handbook*.<sup>2</sup> Affected attributes include the following:

- Safeguards and Security Considerations - The action is intended to establish requirements that will provide assurance that activities involving category 1 and category 2 quantities of radioactive material are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety.
- Public Health (Accident) - The action would reduce the risk that public health and safety will be affected by radiological releases resulting from unauthorized use of the radioactive material.
- Occupational Health (Accident) - The action would reduce the risk that occupational health will be affected by radiological releases resulting from unauthorized use of the radioactive material.
- Industry Implementation - The action may require licensees to make facility modifications, develop a security plan, and conduct background investigations, among other implementation activities.
- Industry Operation - The action would require licensees to conduct additional security activities beyond those currently required such as notification of LLEA at temporary jobsites and for some licensees, develop security zones.
- NRC Implementation - Under the action, NRC will develop guidance and revise inspection procedures as a result of the new requirements.
- NRC Operation - The action would require the NRC Operations Center to answer calls from licensees when they discover an imminent or actual threat against the

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<sup>2</sup> *Regulatory Analysis Technical Evaluation Handbook, Final Report*, NUREG/BR-0184, Office of Nuclear Regulatory Research, January 1997.

category 1 or category 2 quantities of radioactive material, as well as suspicious activities. The action (options 2 and 3 only) would also require NRC staff to analyze the fingerprint and criminal history record check results for the reviewing official for each licensee.

- Regulatory Efficiency - The action (options 2 and 3 only) would result in enhanced regulatory efficiency through regulatory and compliance improvements.
- Off-site Property - The action would reduce the risk that off-site property would be affected by radiological releases resulting from unauthorized use of the radioactive material.
- On-Site Property - The action would reduce the risk that on-site property would be affected by radiological releases resulting from unauthorized use of the radioactive material.
- Other Government - Agreement States would need to issue compatible requirements. LLEA interaction with licensees could increase which would result in an expenditure of resources but would result in a more informed and prepared LLEA.

Attributes that are not expected to be affected under any of the options include the following: public health (routine), occupational health (routine), general public, environmental, improvements in knowledge, and antitrust considerations.

### **3.2 Analytical Methodology for Main Analysis**

This section describes the process used to evaluate benefits and costs associated with the various regulatory options. The benefits (values) include desirable changes in affected attributes, e.g., monetary savings and improved security and safety. The costs (impacts or burdens) include undesirable changes in affected attributes, e.g., increased monetary costs and increased radiation exposure levels.

The analysis evaluates several attributes on a quantitative basis. (These include industry implementation, industry operation, NRC implementation, and NRC operation.) Quantitative analysis requires a baseline characterization, including factors such as the number of licensees affected, the nature of activities being conducted, and the types of new activities that licensees will implement as a result of the rule. However, licensees may respond to the rule in different ways depending on their licensed activities. It is beyond the scope of this analysis to characterize and analyze the individually affected licensees. The analysis proceeds quantitatively for these attributes by making general assumptions. Sections 3.2.1 – 3.2.3 describe the most significant analytical data and assumptions used in the quantitative analyses of these attributes. Additional details regarding the calculations used in the analysis are presented in the appendices to the analysis.

This analysis relies on a qualitative evaluation of several of the affected attributes (safeguards and security considerations, public and occupational health, and off- and on-site property) due

to the difficulty in quantifying the impact of the current rulemaking.<sup>3</sup> These attributes would be affected by the regulatory options through the associated reduction in the risks of damage from unauthorized use of the radioactive material. Quantification of any of these attributes would require estimation of factors such as: (1) the frequency of attempted theft or diversion, (2) the frequency with which theft or diversion attempts are (i.e., pre-rule) and will be (i.e., post-rule) successful, and (3) the impacts associated with successful theft or diversion attempts.

### 3.2.1 Baseline for Main Analysis

This regulatory analysis measures the incremental impacts of the proposed rule relative to a baseline, which reflects anticipated behavior in the event that the regulation is not imposed. The analysis assumes full licensee compliance with existing NRC requirements, including current regulations and relevant orders. This is consistent with NUREG/BR-0058, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," Rev. 4, which states that, "in evaluating a new requirement..., the staff should assume that all existing NRC and Agreement State requirements have been implemented." Section 4.1 presents the estimated incremental costs and savings of the proposed rule relative to the main analysis.

### 3.2.2 Data

To the extent practical, quantitative information (e.g., costs and savings) and qualitative information (e.g., the nature and magnitude of safeguards and security impacts) on attributes affected by the rule have been obtained from NRC staff. NRC staff discussed its understanding of the potential differences between the proposed new requirements and the current requirements and has incorporated available, nonsafeguards, information into this draft regulatory analysis. The NRC is seeking additional insight from stakeholders on implementing costs and related issues.

### 3.2.3 Assumptions

The main analysis assumes that any one-time implementation costs are incurred in calendar year 2011. The main analysis and the no-action option assume that one-time costs have already occurred and are not factored into the analysis for those aspects required by the security orders. Ongoing costs of operation related to the rule are assumed to begin in 2011, and are modeled on an annual cost basis. The analysis calculated cost and savings over a 20-year period, with each year's costs or savings discounted back at a 7-percent and 3-percent discount rate, in accordance with NUREG/BR-0058, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," Rev. 4. The detailed incremental cost and savings calculations are presented in Appendices A and B. Costs and savings are expressed in 2010 dollars.

For the main analysis, the NRC assumed that 1,400 licensees would fully implement the security provisions and another 1,550 licensees would need to conduct some documentation under Option 2 and 2,950 licensees would be impacted under Option 3. These licensees include a wide range of licensees, including pool-type irradiator licensees; manufacturer and

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<sup>3</sup> The regulatory efficiency attribute also is evaluated qualitatively by definition. See NRC's *Regulatory Analysis Technical Evaluation Handbook*, Section 5.5.14.

distributor licensees; medical facilities with gamma knife devices; self-shielded irradiator licensees (including blood irradiators); teletherapy unit licensees; radiographers; well loggers; broad scope users; radioisotope thermoelectric generator licensees; and licensees that ship or prepare for shipment of category 1 or category 2 quantities of radioactive material. Because the licensees impacted by the rule vary so greatly, it is hard to estimate the burden that would be imposed by the proposed rule for a typical licensee. Licensees can select different methods for many of the security measures. Many of the licensees may be small businesses. The regulatory analysis assumes an average sized facility for calculating the costs.

The NRC assumes that three to five licensees would be issued security orders per year under the no-action alternative. This cost is not included in the analysis.

### **3.3 Analytical Methodology for Pre-Order Analysis**

This section describes the process used to evaluate benefits and costs associated with the various regulatory options. The benefits (values) include desirable changes in affected attributes, e.g., monetary savings and improved security and safety. The costs (impacts or burdens) include undesirable changes in affected attributes, e.g., increased monetary costs and increased radiation exposure levels.

The analysis evaluates several attributes on a quantitative basis. (These include industry implementation, industry operation, NRC implementation, and NRC operation.) Quantitative analysis requires a baseline characterization, including factors such as the number of licensees affected, the nature of activities being conducted, and the types of new activities that licensees will implement as a result of the rule. However, licensees may respond to the rule in different ways depending on their licensed activities. It is beyond the scope of this analysis to characterize and analyze the individually affected licensees. The analysis proceeds quantitatively for these attributes by making general assumptions. Sections 3.3.1 – 3.3.3 describe the most significant analytical data and assumptions used in the quantitative analysis of these attributes. Additional details regarding the calculations used in the analysis are presented in the appendices.

This pre-order analysis relies on a qualitative evaluation of several of the affected attributes (safeguards and security considerations, public and occupational health, regulatory efficiency, and off- and on-site property) due to the difficulty in quantifying the impact of the current rulemaking. These attributes would be affected by the regulatory options through the associated reduction in the risks of damage from unauthorized use of the radioactive material. Quantification of any of these attributes would require estimation of factors such as: (1) the frequency of attempted theft or diversion, (2) the frequency with which theft or diversion attempts are (i.e., pre-rule) and will be (i.e., post-rule) successful, and (3) the impacts associated with successful theft or diversion attempts.

#### **3.3.1 Pre-Order Analysis**

The pre-order analysis measures the incremental impacts of the proposed rule assuming that the security orders were never issued. The analysis assumes full licensee compliance with existing NRC regulations, but not the security orders that have been issued. Section 4.2

presents the estimated incremental costs and savings of the proposed rule relative to the pre-order analysis.

### 3.3.2 Data

To the extent practical, quantitative information (e.g., costs and savings) and qualitative information (e.g., the nature and magnitude of safeguards and security impacts) on attributes affected by the rule have been obtained from NRC staff. NRC staff discussed its understanding of the potential differences between the proposed new requirements and the current requirements and has incorporated available, nonsafeguards-information into this draft regulatory analysis. The NRC is seeking additional insight from stakeholders on implementing costs and related issues.

### 3.3.3 Assumptions

The pre-order analysis assumes that any one-time implementation costs are incurred in calendar year 2011. Ongoing costs of operation related to the rule are assumed to begin in 2011, and are modeled on an annual cost basis. The analysis calculated cost and savings over a 20 year period, with each year's costs or savings discounted back at a 7-percent and 3-percent discount rate, in accordance with NUREG/BR-0058, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," Rev. 4. The detailed incremental cost and savings calculations are presented in Appendices A and B. Costs and savings are expressed in 2010 dollars.

For the pre-order analysis, the NRC assumed that 1,400 licensees would fully implement the security provisions and another 1,550 licensees would need to conduct some documentation under Option 2, and 2,950 licensees would be impacted under Option 3.

## 4. Results

This section presents the analytical results. Section 4.1 presents findings on the overall benefits and costs of the three options under the main analysis, and section 4.2 presents the findings for the pre-order analysis.

### 4.1 Benefits and Costs for Main Analysis

This section summarizes the benefits and costs estimated for the regulatory options under the main analysis. To the extent that the affected attributes could be analyzed quantitatively, the net effect of each option has been calculated and is presented below. However, some values and impacts could be evaluated only on a qualitative basis.

The results of the value-impact analysis are summarized in Exhibits 4-1 and 4-2. Exhibit 4-3 provides the cost comparison for the three options. Option 2 would result in a net quantitative impact estimated between \$450,996,566 and \$612,347,047 (7-percent and 3-percent discount rate, respectively), and option 3 would result in a net quantitative impact estimated between \$1,102,164,007 and \$1,452,904,865 (7-percent and 3-percent discount rate, respectively). The majority of the costs would be incurred by industry.



There are no quantifiable values (i.e. Benefits) associated with the rule. The qualitative values of the rule are associated with safeguard and security considerations of the decreased risk of a security-related event, such as theft or diversion of radioactive material and subsequent use for unauthorized purposes. Increasing the security of high-risk radioactive material decreases this risk and increases the common defense and security of the nation. Other qualitative values that are positively affected by the decreased risk of a security-related event include public and occupational health due to an accident or event and the risk of damage to on-site and off-site property. In addition, regulatory efficiency is enhanced by the rule.

**Exhibit 4-1**  
**Summary of Benefits/Savings and Costs/Burdens for Main Analysis**

NET MONETARY SAVINGS (OR COSTS) – TOTAL PRESENT VALUE	NON-MONETARY BENEFITS/COSTS
<p><b>Option 1: No Action</b></p> <p><b>Industry:</b>            (\$0) using a 7% discount rate            (\$0) using a 3% discount rate</p> <p><b>NRC/Agreement States:</b>            (\$0) using a 7% discount rate            (\$0) using a 3% discount rate</p>	<p><u>Qualitative Benefits:</u></p> <p>Safeguards and Security: Increased level of assurance that category 1 and category 2 quantities of radioactive material are safeguarded.</p> <p>Public Health (Accident): Reduced risk that public health will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>Occupational Health (Accident): Reduced risk that occupational health will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>Off-site Property: Reduced risk that off-site property will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>On-site Property: Reduced risk that on-site property will be affected by radiological releases from unauthorized use of radioactive material.</p> <p><u>Qualitative Costs:</u></p> <p>Regulatory Efficiency: Regulatory efficiency would be reduced by the need to issue security orders to new licensees and licensees increasing their possession limit above the category 2 threshold.</p>
<p><b>Option 2: Rulemaking(Possession Base)</b></p> <p><b>Industry:</b>            (\$433,350,357) using a 7% discount rate            (\$588,956,864) using a 3% discount rate</p> <p><b>NRC/State:</b>            (\$12,026,479) using a 7% discount rate            (\$16,575,368) using a 3% discount rate</p> <p><b>Agreement States:</b>            (\$5,619,730) using a 7% discount rate            (\$6,814,815) using a 3% discount rate</p>	<p><u>Qualitative Benefits:</u></p> <p>Safeguards and Security: Increased level of assurance that category 1 and category 2 quantities of radioactive material are safeguarded.</p> <p>Public Health (Accident): Reduced risk that public health will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>Occupational Health (Accident): Reduced risk that occupational health will be affected by radiological releases from unauthorized use of radioactive material.</p>

	<p>Off-site Property: Reduced risk that off-site property will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>On-site Property: Reduced risk that on-site property will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>Regulatory Efficiency: Enhanced regulatory efficiency through regulatory and compliance improvements.</p> <p><u>Qualitative Costs:</u></p> <p>None.</p>
<p><b>Option 3: Rulemaking (Authorization Base)</b></p> <p><b>Industry:</b> (\$1,078,740,403) using a 7% discount rate (\$1,421,576.173) using a 3% discount rate</p> <p><b>NRC/State:</b> (\$14,848,144) using a 7% discount rate (\$20,363,061) using a 3% discount rate</p> <p><b>Agreement States:</b> (\$8,575,460) using a 7% discount rate (\$10,965,631) using a 3% discount rate</p>	<p><u>Qualitative Benefits:</u></p> <p>Safeguards and Security: Increased level of assurance that category 1 and category 2 quantities of radioactive material are safeguarded.</p> <p>Public Health (Accident): Reduced risk that public health will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>Occupational Health (Accident): Reduced risk that occupational health will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>Off-site Property: Reduced risk that off-site property will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>On-site Property: Reduced risk that on-site property will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>Regulatory Efficiency: Enhanced regulatory efficiency through regulatory and compliance improvements.</p> <p><u>Qualitative Costs:</u></p> <p>None.</p>

**Exhibit 4-2**  
Industry Savings and Costs for Main Analysis

	OPTION 1 (NO-ACTION)		OPTION 2 (RULEMAKING BASED ON POSSESSION)		OPTION 3 (RULEMAKING BASED ON AUTHORIZATION)	
	One-Time Savings (Cost)	Annual Savings (Cost)	One-Time Savings (Cost)	Annual Savings (Cost)	One-Time Savings (Cost)	Annual Savings (Cost)
Access Authorization Program						
Access Authorization Program Procedures	NA	NA	(\$8,400,000)	0	(\$17,700,000)	0
Background Investigations	0	0	(\$1,864,800)	0	(\$9,457,200)	(\$2,064,600)
Background Re-investigations	NA	NA	NA	(\$369,600)	NA	(\$7,788,000)
Access Lists	0	0	0	0	(\$465,000)	0
Program Review	NA	NA	NA	(\$7,000,000)	NA	(\$14,750,000)
Subtotal for Access Authorization Program	\$0	\$0	(\$10,264,800)	(\$7,369,600)	(\$27,622,200)	(\$24,602,600)
Security Program						
Security Plan	0	0	(\$17,193,000)	0	(\$17,193,000)	0

Security Procedures	NA	NA	(\$8,400,000)	0	(\$17,700,000)	0
Information Protection Procedures	0	0	0	0	(\$4,650,000)0	0
Security Training	NA	NA	(\$11,480,000)	(\$5,880,000)	(\$24,190,000)	(\$12,390,000)
LLEA Coordination	0	0	0	0	(\$3,177,500)	(\$852,500)
Security Measures	0	0	0	0	(\$23,250,000)	(\$1,550,000)
Program Review	NA	NA	0	(\$7,000,000)	0	(\$14,750,000)
Maintenance and Testing	NA	NA	0	(\$7,000,000)	0	(\$14,750,000)
Physical Inventory Checks	NA	NA	0	(\$3,640,000)	0	(\$7,670,000)
LLEA Notification – Temporary Jobsites	NA	NA	0	(\$80,640)	0	(\$80,640)
Subtotal for Security Program	\$0	\$0	(\$237,073,000)	(\$23,600,640)	(\$90,160,500)	(\$52,043,140)
Transportation Security						
Procedure Development	NA	NA	(\$28,000)	0	(\$28,000)	0
Training	NA	NA	(\$64,000)	0	(\$64,000)	0

License Verification	0	0	0	(\$375,000)	0	(\$375,000)
Preplanning and Coordination (Category 1)	0	0	0	0	0	0
Post Notification (Category 1)	0	0	0	0	0	0
Documentation (Category 1)	0	0	0	0	0	0
Advance Notifications	0	0	0	0	0	0
Protection of Category 1 Shipments	0	0	0	0	0	0
Preplanning and Coordination (Category 2)	0	0	0	0	0	0
Post Notification (Category 2)	0	0	0	0	0	0
Documentation (Category 2)	0	0	0	0	0	0
Protection of Category 2 Shipments	0	0	0	0	0	0
Notification of Revisions	0	0	0	0	0	0

Subtotal for transportation Security	\$0	\$0	(\$92,000)	\$0	(\$92,000)	(\$375,000)
Records and Reporting						
Notification of Compliance	NA	NA	(\$368,750)	0	(\$368,750)	0
Records	-	0	(\$700,000)	(\$1,750,000)	(\$1,475,000)	(\$3,687,500)
Procedure Updates	NA	NA	0	(\$3,220,000)	0	(\$6,785,000)
Event Notification	0	0	0	(\$12,048)	0	(\$12,048)
Subtotal for Records and Reporting	\$0	\$0	(\$1,068,750)	(\$4,982,048)	(\$1,250,000)	(\$10,484,548)
TOTAL	\$0	\$0	(\$48,498,550)	(\$36,327,288)	(\$119,718,450)	(\$87,505,288)

**Exhibit 4-3 Cost Comparison for Main Analysis**

	OPTION 1 – (NO-ACTION)		OPTION 2 (RULEMAKING BASED ON POSSESSION)		OPTION 3 (RULEMAKING BASED ON AUTHORIZATION)	
	3% Discount	7% Discount	3% Discount	7% Discount	3% Discount	7% Discount
Industry One-Time Savings (Cost)	\$0	\$0	(\$48,498,550)	(\$48,498,550)	(\$119,718,450)	(\$119,718,450)
Industry Annual Savings (Cost)	\$0	\$0	(\$540,458,314)	(\$384,851,807)	(\$1,301,857,723)	(\$959,021,953)
NRC/State One-Time Savings (Cost)	\$0	\$0	(\$775,998)	(\$775,988)	(\$1,208,448)	(\$1,208,448)
NRC/State Annual Savings (Cost)	\$0	\$0	(\$15,799,370)	(\$11,250,481)	(\$19,154,613)	(\$13,639,696)
Agreement State One-Time Savings (Cost)	\$0	\$0	(\$2,664,000)	(\$2,664,000)	(\$2,664,000)	(\$2,664,000)
Agreement State Annual Savings (Cost)	\$0	\$0	(\$4,150,815)	(\$2,955,730)	(\$8,301,631)	(\$5,911,460)
<b>Total Savings (Cost)</b>	\$0	\$0	(\$612,347,047)	(\$450,996,566)	(\$1,452,904,865)	(\$1,102,164,007)

#### **4.2 Benefits and Costs for Pre-Order Analysis**

This section summarizes the benefits and costs estimated for the regulatory options under the pre-order analysis. To the extent that the affected attributes could be analyzed quantitatively, the net effect of each option has been calculated and is presented below. However, some values and impacts could be evaluated only on a qualitative basis.

The results of the value-impact analysis are summarized in Exhibits 4-4 and 4-5. Option 2 would result in a net quantitative impact estimated between \$939,259,048 and \$1,276,425,028

(7-percent and 3-percent discount rate, respectively), and option 3 would result in a net quantitative impact estimated between \$1,616,863,568 and \$2,197,090,772 (7-percent and 3-percent discount rate, respectively). The majority of the costs would be incurred by industry.

Although there are no quantifiable values (i.e., Benefits) associated with the rule alternative, there are significant qualitative benefits of the proposed rule relative to the pre-order baseline. The qualitative values of the rule are associated with safeguard and security considerations of the decreased risk of a security-related event, such as theft or diversion of radioactive material and subsequent use for unauthorized purposes. Increasing the security of high-risk radioactive material decreases this risk and increases the common defense and security of the nation. Other qualitative values that are positively affected by the decreased risk of a security-related event include public and occupational health due to an accident or event and the risk of damage to on-site and off-site property.

**Exhibit 4-4**  
Summary of Benefits/Savings and Costs/Burdens for Pre-Order Analysis

NET MONETARY SAVINGS (OR COSTS) – TOTAL PRESENT VALUE	NON-MONETARY BENEFITS/COSTS
<b>Option 1: No Action</b>  \$0	<u>Qualitative Benefits and Costs:</u>  None.
<b>Option 2: Rulemaking</b>  <b>Industry:</b> (\$921,254,790) using a 7% discount rate (\$1,252,676,795) using a 3% discount rate  <b>NRC:</b> (\$12,384,528) using a 7% discount rate (\$16,933,418) using a 3% discount rate  <b>Agreement States:</b> (\$5,619,730) using a 7% discount rate (\$6,814,815) using a 3% discount rate	<u>Qualitative Benefits:</u>  Safeguards and Security: Increased level of assurance that category 1 and category 2 quantities of radioactive material are safeguarded.  Public Health (Accident): Reduced risk that public health will be affected by radiological releases from unauthorized use of radioactive material.  Occupational Health (Accident): Reduced risk that occupational health will be affected by radiological releases from unauthorized use of radioactive material.  Off-site Property: Reduced risk that off-site property will be affected by radiological releases from unauthorized use of radioactive material.  On-site Property: Reduced risk that on-site property will be affected by radiological releases from unauthorized use of radioactive material.  Regulatory Efficiency: Enhanced regulatory efficiency through regulatory and compliance improvements.  <u>Qualitative Costs:</u>  None.
<b>Option 3: Rulemaking</b>	<u>Qualitative Benefits:</u>  Safeguards and Security: Increased level of assurance that category 1 and category 2 quantities of radioactive



<p><b>Industry:</b> (\$1,593,073,014) using a 7% discount rate (\$2,165,395,130) using a 3% discount rate</p> <p><b>NRC:</b> (\$15,215,094) using a 7% discount rate (\$20,730,010) using a 3% discount rate</p> <p><b>Agreement States:</b> (\$8,575,460) using a 7% discount rate (\$10,965,631) using a 3% discount rate</p>	<p>material are safeguarded.</p> <p>Public Health (Accident): Reduced risk that public health will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>Occupational Health (Accident): Reduced risk that occupational health will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>Off-site Property: Reduced risk that off-site property will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>On-site Property: Reduced risk that on-site property will be affected by radiological releases from unauthorized use of radioactive material.</p> <p>Regulatory Efficiency: Enhanced regulatory efficiency through regulatory and compliance improvements.</p> <p><u>Qualitative Costs:</u> None.</p>
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**Exhibit 4-5**  
Industry Savings and Costs for Pre-Order Analysis

	OPTION 2 (RULEMAKING BASED ON POSSESSION)		OPTION 3 (RULEMAKING BASED ON AUTHORIZATION)	
	One-Time Savings (Cost)	Annual Savings (Cost)	One-Time Savings (Cost)	Annual Savings (Cost)
Access Authorization Program				
Access Authorization Program Procedures	(\$8,400,000)	-	(\$17,700,000)	-
Background Investigations	(\$11,188,800)	(\$1,864,800)	(\$23,576,400)	(\$8,991,000)
Background Reinvestigations (every 10 years)	-	(\$369,600)	-	(\$7,788,000)
Access Lists	(\$420,000)	-	(\$885,000)	-
Program Review	-	(\$7,000,000)	-	(\$14,750,000)
Subtotal for Access Authorization Program	(\$20,008,800)	(\$9,234,400)	(\$42,161,400)	(\$31,529,000)
Security Program				
Security Plan	(\$32,450,000)	-	(\$32,450,000)	-

Security Procedures	(\$8,400,000)	-	(\$17,700,000)	-
Information Protection Procedures	(\$4,200,000)	-	(\$8,850,000)	
Security Training	(\$11,480,000)	(\$5,880,000)	(\$24,190,000)	(\$12,390,000)
LLEA Coordination	(\$2,870,000)	(\$770,000)	(\$6,047,500)	(\$1,622,500)
Security Measures	(\$21,000,000)	(\$1,400,000)	(\$44,250,000)	(\$2,950,000)
Program Review	-	(\$7,000,000)	-	(\$14,750,000)
Maintenance and Testing	-	(\$7,000,000)	-	(\$14,750,000)
Physical Inventory Checks	-	(\$3,640,000)	-	(\$7,670,000)
LLEA Notification – Temporary Jobsites	-	(\$80,640)	-	(\$80,640)
Subtotal for Security Program	(\$80,400,000)	(\$25,770,640)	(\$133,487,500)	(\$54,213,140)
Transportation Security				
Procedure Development	(\$28,000)	-	(\$28,000)	-
Training	(\$64,000)	-	(\$64,000)	-
License Verification	-	(\$758,750)	-	(\$758,750)
Preplanning and Coordination (Category 1)	-	(\$105,000)	-	(\$105,000)

Post Notification (Category 1)	-	(\$5,600)	-	(\$5,600)
Documentation (Category 1)	-	(\$18,900)	-	(\$18,900)
Advance Notifications	-	(\$142,200)	-	(\$142,200)
Protection of Category 1 Shipments	-	(\$3,500,000)	-	(\$3,500,000)
Preplanning and Coordination (Category 2)	-	(\$1,500,000)	-	(\$1,500,000)
Post Notification (Category 2)	-	(\$480,000)	-	(\$480,000)
Documentation (Category 2)	-	(\$870,000)	-	(\$870,000)
Protection of Category 2 Shipments	-	(\$30,000,000)	-	(\$30,000,000)
Revision Notifications	-	(\$4,800)	-	(\$4,800)
Subtotal for transportation Security	(\$92,000)	(\$37,385,250)	(\$92,000)	(\$37,385,250)
Records and Reporting				
Licensee Notification on Compliance	(\$368,750)	0	(\$368,750)	0
Records	(\$700,000)	(\$1,750,000)	(\$1,475,000)	(\$3,687,500)
Procedure Updates	-	(\$3,220,000)	-	(\$6,785,000)

Event Notification	-	(\$12,198)	-	(\$12,198)
Subtotal for Records and Reporting	(\$1,068,750,000)	(\$4,982,198)	(\$1,843,750)	(\$10,484,698)
TOTAL	(\$101,569,550)	(\$77,372,488)	(\$177,584,650)	(\$133,612,088)

## **5. Decision Rationale**

The decision rationale is based on the main analysis. The pre-order analysis is provided for informational purposes only. Relative to the no-action alternative, option 2 would result in a net cost estimated as approximately \$450,996,566 (total present value over a 20-year period), assuming a 7-percent discount rate, or approximately \$612,347,047 assuming a 3-percent discount rate. Option 3 would result in a net cost estimated as approximately \$1,102,164,007 (total present value over a 20-year period), assuming a 7-percent discount rate, or approximately \$1,452,904,865 assuming a 3-percent discount rate. Offsetting the net cost, the NRC believes that options 2 and 3 would result in substantial nonquantified benefits related to safety and security. Options 2 and 3 would also result in enhanced regulatory efficiency and effectiveness and would provide for public involvement. Although significant costs are incurred as a result of the rule, the qualitative benefits associated with the rule outweigh its cost. The NRC has selected Option 2 as it would impose less burden on industry and still meet the objectives of the rule.

The typical licensee would have a one-time cost of approximately \$27,000 and an annual cost of approximately \$25,700 to fully implement the proposed rule. Much of this cost would result from the requirements to have procedures, conduct training, and to develop a security plan. Although not required by the various security orders, many licensees would have developed procedures and conducted training and may only require minor revisions; therefore, the actual cost may be lower. Additional large costs are the weekly physical check of the category 2 sources and the annual program review. The NRC believes that the weekly check is a vital part of the security program, particularly for materials that are used infrequently. The program review is important for licensees to review the effectiveness of the program and to ensure that requirements are being implemented.

As noted earlier, some of the licensees that would be impacted by the proposed rule are small businesses. The proposed rule would impose the minimum requirements that the NRC believes is necessary to adequately protect the public health and safety and the common defense and security. Therefore, the NRC could not grant relief to small entities to allow them to implement less effective measures. The proposed rule would provide some flexibility in the particular measures that a licensee could choose to employ.

## **6. Implementation**

This section identifies how and when the proposed rule action would be implemented, the required NRC actions to ensure implementation, and the impact on NRC resources.

### **6.1 Schedule**

The action would be implemented through a proposed rule, resolution of public comments, and a final rule. The final rule would be effective 180 days from the date of publication. The staff has not identified any impediments to implementing the recommended alternative. Agreement States would have 3 years to issue compatible regulations.

## **6.2 Impacts on Other Requirements**

As discussed in Section 4.1, affected licensees will experience most of the impact of the proposed rule. The NRC estimates that it will spend 0.7 FTE to revise implementation guidelines and inspection procedures. Each Agreement State would be expected to spend 0.5 FTE to establish regulations. The NRC estimates that on average an additional 3 hours per licensee will be needed to conduct the security-related inspections. This will result in approximately 1,200 hours for NRC inspection and approximately 3,000 hours for Agreement State inspection. The actual impact on any given Agreement State will depend on the number of licensees and the frequency of inspection.

Appendix A:

INDUSTRY ACTIVITIES AND COST EQUATIONS



## A.1 ONE-TIME COSTS FOR INDUSTRY

### Access Authorization Program

Procedures will be necessary to implement access authorization program.

Hours of staff time for procedures	50
Wage of staff per hour	\$100
Cost of staff time for procedures	<u>\$5,000</u>
Hours of clerical time for procedures	20
Wage of clerical worker per hour	\$50
Cost of clerical time for procedures	<u>\$1,000</u>
Total cost for access authorization program procedures	\$6,000

Individuals whose assigned duties and responsibilities permit the individual to have unescorted access to category 1 or category 2 quantities of radioactive material are subject to a background investigation.

Number of hours to conduct a background check	6
Wage of manager per hour	\$100
	<u>\$600</u>
Cost of credit history	\$20
Cost of taking fingerprints	\$10
Cost for fingerprint submission	\$36
Cost of background check	\$666
Number of individuals needing background checks per licensee	10
Number of reviewing officials needing background checks	2
Total cost of background investigation per licensee	\$7,992
Cost of documenting determinations and access lists (material and information)	
Hours of staff time for lists	3
Wage of staff per hour	\$100
Total cost for documenting access per licensee	<u>\$300</u>

### Notification on Compliance

Licensees would need to notify NRC on compliance.

Hours of staff time for notification	1
Wage of staff per hour	\$100
	<hr/>
Cost of staff time for procedures	\$100
Hours of clerical time for notification	0.5
Wage of clerical worker per hour	\$50
	<hr/>
Cost of clerical time for procedures	\$25
<b>Total Cost of Notification per Licensee</b>	<b>\$125</b>

**Security Program**

Preparation of security plan

Hours of staff time for plan	100
Wage of staff per hour	\$100
	<hr/>
Cost of staff time for plan	\$10,000
Hours of clerical time per set of plans	20
Wage of clerical worker per hour	\$50
	<hr/>
Cost of clerical worker time for security plan	\$1,000
<b>Total cost for security plans</b>	<b>\$11,000</b>

Procedures will be necessary to implement the security program.

Hours of staff time for procedures	50
Wage of staff per hour	\$100
	<hr/>
Cost of staff time for procedures	\$5,000
Hours of clerical time for procedures	20
Wage of clerical worker per hour	\$50
	<hr/>
Cost of clerical time for procedures	\$1,000
<b>Total cost for security procedures</b>	<b>\$6,000</b>

Training on Security Related Aspects:

Hours of staff time	8
Wage of staff per hour	\$100

Number of people requiring training		10
Cost of training per licensee		<u>\$8,000</u>
Number of hours for a training manager to document all training per year		2
Wage of training manager		\$100
Cost for training documentation		<u>\$200</u>
Total cost of security training	\$8,200	
Procedures will be necessary for information protection.		
Hours of staff time for procedures		25
Wage of staff per hour		\$100
Cost of staff time for procedures		<u>\$2,500</u>
Hours of clerical time for procedures		10
Wage of clerical worker per hour		\$50
Cost of clerical time for procedures		<u>\$500</u>
Total cost for information protection procedures	\$3,000	
LLEA Coordination on Security		
Hours of staff time		20
Wage of staff per hour		\$100
		<u>\$2,000</u>
Documentation of coordination activities		
Hours of staff time		0.50
Cost of staff time per hour		\$100
		<u>\$50</u>
Total cost of LLEA coordination	\$2,050	
Cost of Physical Protection Elements		
Equipment, system cost, etc, per licensee		\$15,000
Total cost of equipment, systems, etc, per licensee	\$15,000	

**Transportation Security**

Preparation of procedures for category 1 shipments

Hours of staff time for procedures	15
Wage of staff per hour	\$100
Cost of staff time for procedures	<u>\$1,500</u>
Hours of clerical time for procedures	5
Wage of clerical worker per hour	\$50
Cost of clerical time for procedures	<u>\$250</u>
Number of licensees	16

Total cost for transportation procedures \$28,000

Training on procedures for category 1 shipments

Hours of staff time	4
Wage of staff per hour	\$100
Number of people requiring training	10
Cost of training per licensee	<u>\$4000</u>
Number of licensees	16

Total cost of transportation training \$64,000

**Total Cost of Transportation Security \$92,000**

**Records**

Licensee must retain additional records based on the new requirements

Cost of additional file cabinets etc.	\$500
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**Total Cost for Records per Licensee \$500**

## A.2 ANNUAL COSTS

### Program Review

Industry must conduct a performance evaluation of the security and access authorization program.

Cost of the security program review on an annual basis	\$5,000
Cost of access authorization program review on annual basis	\$5,000

**Total Program Review Cost per Licensee** **\$10,000**

### Training on Security Related Aspects

Industry will need to conduct refresher training.

Hours of staff time	4
Wage of staff per hour	\$100
Number of people requiring training	10
	<hr/>
	\$4,000

Number of hours for a training manager to document and certify all training per year	2
Wage of training manager	\$100
	<hr/>
Cost for training documentation	\$200

**Total Cost of Refresher Training per Licensee** **\$4,200**

### Alarm Monitoring

Cost per licensee for security firm to monitor alarms	\$1,000
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**Total Cost of Alarm Monitoring per licensee** **\$1,000**

### Procedure Development

The procedures will need to be periodically updated.

Hours of staff time for procedures	20
Wage of staff per hour	\$100
	<hr/>
Cost of staff time for procedures	\$2,000
Hours of clerical time for procedures	6

Wage of clerical worker per hour	\$50
Cost of clerical time for procedures	<u>\$300</u>
<b>Total Cost for Procedure Updates per Licensee</b>	<b>\$2,300</b>

**LLEA Coordination on Security**

Hours of staff time	5
Wage of staff per hour	\$100
	<u>\$500</u>
Documentation of coordination activities	
Hours of staff time	0.50
Cost of staff time per hour	\$100
	<u>\$50</u>
<b>Total Cost of LLEA Coordination per Licensee</b>	<b>\$550</b>

**Maintenance and Testing Program**

Security equipment will need to be tested and maintained.

Hours of staff time	50
Cost of staff per hour	\$100
	<u>\$5,000</u>
Cost of staff time	
<b>Total Cost for Maintenance and Testing per Licensee</b>	<b>\$5,000</b>

**Records**

Industry must retain additional records based on the new requirements.

Hours of manager time	10
Wage of manager per hour	\$100
	<u>\$1,000</u>
Cost of manager time	
Hours of clerical time for records	5
Wage of clerical worker per hour	\$50
	<u>\$250</u>
Cost of clerical time for records	

**Total Cost for Records per Licensee** **\$1,250**

**Access Authorization Program**

Any newly hired individual whose assigned duties and responsibilities permit the individual to have unescorted access to category 1 or category 2 quantities of radioactive material is subject to a background investigation.

Number of new hires needing background checks per year	2
Cost of each background check	\$666
	-----
Cost of background check	\$1,332

**Total Cost of Background Investigations per Licensee** **\$1,332**

Individuals are subject to reinvestigation every 10 years.

Number of hours to conduct a background check	2
Wage of manager per hour	\$100
	-----
	\$200

Cost of credit history	\$20
Cost of background check	\$220

Number of individuals needing background checks per licensee	12
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**Total Cost of Background Reinvestigation per Licensee** **\$2,640**

**Event Notifications**

Industry must notify the NRC Operations Center of missing or lost material, suspicious activities, and theft or diversion. The average number of calls for these types of events has been 5.7 averaged over 10 years. (57 calls related to category 2 radioactive material and 0 for category 1 radioactive material)

Hours of staff time per call	0.25
Cost of manager's time per hour	\$100
Number of calls per year	6
	-----
Cost of notifications per year	\$150

Industry must provide a written follow-up report for notifications.

Hours of staff time per written report	20
Wage of staff per hour	\$100

Number of written reports per year	6
Cost of staff time for written reports	----- \$12,000
Industry must call when lost/missing radioactive material is found.	
Hours of staff time per call	0.08
Cost of staff time per hour	\$100
Number of calls per year	6
Cost of recovery notifications per year	----- \$48
<b>Total Cost for Event Notification</b>	<b>\$12,198</b>

**LLEA Notification for Temporary Job Sites**

Hours of staff time to notify LLEA	1
Cost of staff time per hour	\$100
Number of notifications per licensee per year	2
Number of licensees	336
	----- \$67,200
Hours of clerical staff time to file documents	. 0.8
Cost of clerical time per hour	\$50
Number of licensees	336
	----- \$13,440
<b>Total Cost for LLEA Notifications</b>	<b>\$80,640</b>

**Physical Inventory Checks**

Hours of staff time to check inventory	0.5
Cost of staff time per hour	\$100
Number of checks	52
	----- 2,600
<b>Total Cost of Physical Inventory Check per Licensee</b>	<b>\$2,600</b>

**Category 1 Shipments**

Industry has averaged 317 shipments of category 1 quantities of radioactive material per year over the last 3 years. For purposes of the regulatory analysis, an assumption of 350 shipments per year is used.

Licensee Verification



Hours of staff time per call to agency to verify license	0.25
Cost of staff time per hour	\$100
Number of calls per year	350
Cost of license verification for category 1 shipments	<u>\$8,750</u>
Preplanning and Coordination	
Hours of staff time with receiving licensee (0.25 x 2)	0.50
Cost of staff time per hour	\$100
Number of shipments per year	350
Cost of coordination with receiving licensee	<u>\$17,500</u>
Hours of staff time with State thru which shipment passes	0.25
Cost of staff time per hour	\$100
Number of States through which shipment passes	10
Number of shipments per year	350
Cost of coordination with States	<u>\$87,500</u>
Cost of Preplanning and coordination	\$105,000
Notification of shipping licensee upon receipt	
Hours of staff time with shipping licensee (0.08 x 2)	0.16
Cost of staff time per hour	\$100
Number of shipments per year	350
Cost of post notification with shipping licensee	<u>\$5,600</u>
Document preplanning and coordination activities	
Hours of staff time	0.50
Cost of staff time per hour	\$100
Number of shipments per year	350
	<u>17,500</u>
Hours of clerical staff to file documents	0.08
Cost of clerical time per hour	\$50
Number of shipments per year	350
	<u>\$1,400</u>
Cost for documenting and filing for coordination activities	\$18,900

## Advance Notifications

Hours of staff time to prepare and send advance notification	4
Cost of staff time per hour	\$100
Number of notifications per year	350
	<hr/>
	\$140,000
Hours of staff time for revision notice	0.25
Cost of staff time per hour	\$100
Number of revisions per year	32
	<hr/>
	\$800
Hours of clerical staff to file documents	0.08
Cost of clerical time per hour	\$50
Number of shipments per year	350
	<hr/>
	\$1,400
Total cost of advance notifications	\$142,200
<b>Total Cost for Category 1 Shipment Arrangements</b>	<b>\$280,450</b>
Physical protection of shipments	\$10,000
Number of shipments per year	350
	<hr/>
	\$3,500,000
<b>Total Cost of Protection for Category 1 Shipments</b>	<b>\$3,500,000</b>

## Category 2 Shipments

### Licensee Verification

Hours of staff time per call to agency to verify license	0.25
Cost of staff time per hour	\$100
Number of calls per year	30,000
	<hr/>
Cost of license verification for category 2 shipments	\$750,000

### Preplanning and Coordination

Hours of staff time with receiving licensee (0.25 x 2)	0.50
Cost of staff time per hour	\$100
Number of shipments per year	30,000
	<hr/>
Cost of coordination with receiving licensee	\$1,500,000

Notification of shipping licensee upon receipt

Hours of staff time with shipping licensee (0.08 x 2)	0.16
Cost of staff time per hour	\$100
Number of shipments per year	30,000

Cost of post notification with shipping licensee \$480,000

Document preplanning and coordination activities

Hours of staff time	0.25
Cost of staff time per hour	\$100
Number of shipments per year	30,000

\$750,000

Hours of clerical staff to file documents	0.08
Cost of clerical time per hour	\$50
Number of shipments per year	30,000

Cost for documenting coordination activities \$120,000

**Total Cost of Category 2 Shipment Arrangements \$3,600,000**

Physical protection of shipments	\$1,000
Number of shipment per year	30,000

\$30,000,000

**Total Cost of Protection for Category 2 Shipments \$30,000,000**

Notification of revisions

Hours of staff time with (0.08 x 2)	0.16
Cost of staff time per hour	\$100
Number of shipments per year	300

Cost of revision notifications \$4,800

Appendix B:

NRC/STATE ACTIVITIES AND COST EQUATIONS

## **B.1 ONE-TIME COSTS FOR NRC/STATE**

### **Infrastructure**

NRC revises/develops implementation guidance.

FTE of staff time	0.5
Cost of FTE	\$148,000
Cost of guidance documents	<u>\$74,000</u>

Revision of Inspection Procedures

FTE of staff time	0.2
Cost of FTE	\$148,000
Cost for inspection procedure revisions	<u>\$29,600</u>

**Total Cost of Infrastructure** **\$103,600**

### **Rule Development**

FTE for NRC to develop final rule	3.42
Cost of FTE	\$148,000
Cost for NRC to develop final rule	<u>\$506,160</u>
FTE for State to develop rule	0.5
Cost of FTE	\$148,000
Number of Agreement States	36
Cost for Agreement States to develop rules	<u>\$2,664,000</u>

**Total Cost of Rule Development** **\$3,170,160**

### **NRC Fingerprint Processing**

Review of fingerprints for reviewing officials

NRC/State time to review fingerprints	0.25
Cost of NRC/State time per hour	\$93
Number per licensee	2
Cost of review per fingerprint set	<u>\$46.50</u>

Processing of fingerprints

NRC processing time	0.25
Cost of NRC time per hour	\$93
Cost of processing per fingerprint set	<u>\$23.25</u>
Number of fingerprints per licensee	10

**Compliance Notifications**

NRC/State processing time	0.25
Cost of NRC/State time per hour	\$93
Cost of processing for 2,950 licensees	<u>\$68,587.50</u>

## **B.2 ANNUAL COSTS FOR NRC/STATE**

### **Event Notifications**

NRC will answer calls from licensees reporting loss/missing, diversion, etc.

Hours of NRC/State staff time per call	0.08
Cost of NRC/State staff time per call	\$93
Number of calls per year	6
	<hr/>
Cost of NRC/State staff time per year for handling calls	\$44.64
Review of 30-day reports	
Hours of NRC/State time per report	1
Cost of NRC/State time per hour	\$93
Number of reports	6
	<hr/>
Cost of NRC/State time to review 30-day reports	\$558
<b>Total Cost of Handling Event Reports</b>	<b>\$602.64</b>

### **Verification of license**

Hours of NRC/State time	0.25
Cost of NRC/State time	\$93
Number of category 1 verifications per year	350
	<hr/>
Cost of license verification	\$8137.50
Hours of NRC/State time	
Hours of NRC/State time	0.25
Cost of NRC/State time	\$93
Number of category 2 verifications per year	30,000
	<hr/>
Cost of license verification	\$697,500
<b>Total Cost of License Verification</b>	<b>\$705,637.50</b>

### **Handling advance notifications**

Hours of NRC time	0.50
Cost of NRC time	\$93
Number of notifications	350
	<hr/>
Cost of NRC for advance notifications	\$16,275

Hours of State time	0.50
Cost of State time	\$93
Number of notifications	350
Number of States	10
Cost of State for advance notifications	<u>\$162,750</u>
<b>Total Cost of Advance Notification</b>	<b>\$179,025</b>
<b><u>Issuance of New Orders</u></b>	
NRC/State staff time	2
Cost of NRC/State time per hour	\$93
Cost of new order issuance	<u>\$186</u>
<b>NRC Fingerprint Processing</b>	
Processing of Fingerprints	
NRC processing time	0.25
Cost of NRC time per hour	\$93
Cost of processing per fingerprint set	<u>\$23.25</u>
<b>NRC/State Inspection</b>	
Additional time for conducting security-related inspections	
NRC/State staff time	3
Cost of NRC/State time per hour	\$93
Additional cost of inspection per licensee	<u>\$279</u>



Appendix C:  
Regulatory Flexibility Analysis

**REGULATORY FLEXIBILITY ANALYSIS FOR THE PROPOSED AMENDMENTS TO 10 CFR PARTS 30, 32, 33, 34, 35, 36, 37, 39, 51, 71, 73, AND 150 (PHYSICAL PROTECTION OF BYPRODUCT MATERIAL)**

I. Background.

The Regulatory Flexibility Act (RFA), as amended 5 U.S.C. 601 *et seq.*, requires that agencies consider the impact of their rulemakings on small entities and, consistent with applicable statutes, consider alternatives to minimize these impacts on the businesses, organizations, and government jurisdictions to which they apply.

The NRC has established standards for determining which NRC licensees qualify as small entities (10 CFR 2.810). These size standards were based on the Small Business Administration's most common receipts-based size standards and include a size standard for business concerns that are manufacturing entities.

Description of the reasons that action by the agency is being considered.

The NRC has long participated in efforts to address radioactive source protection and security. The terrorist attacks of September 11, 2001, however, heightened concerns about the use of risk-significant radioactive materials in a malevolent act. Such an attack is of particular concern because of the widespread use of radioactive materials in the United States by industrial, medical, and academic institutions. The theft or diversion of risk-significant radioactive materials could lead to their unauthorized use in a radiological dispersal device or a radiological exposure device.

Commission regulations provide requirements for the safe use, transit, and control of licensed material. A licensee's loss of control of risk-significant radioactive material, whether it is inadvertent or through a deliberate act, could result in significant adverse impacts that could reasonably constitute a threat to the public health and safety or the common defense and security of the United States. After the attacks of September 11, 2001, the Commission determined that certain licensed material should be subject to enhanced security provisions and safeguarded during transport, and that individuals with unescorted access to risk-significant radioactive material should be subject to background investigations. For additional information see the Discussion portion of the Statements of Consideration (SOC).

Succinct statement of the objectives of, and legal basis for, the proposed rule,

The objective of this proposed rule is to provide reasonable assurance of preventing the theft or diversion of category 1 and category 2 quantities of radioactive material for unauthorized use by establishing generally applicable security requirements similar to those previously imposed by NRC orders. Although an order is legally binding on the licensee receiving the order, a rule makes the requirements generally applicable to all affected licensees. In addition, notice and comment rulemaking is an open process that allows for public participation. This proposed rulemaking would place security requirements for category 1 and category 2 quantities of radioactive material into the regulations. In developing the proposed rule, the staff considered, among other things, the various security orders, lessons-learned during implementation, the recommendations from the Independent Review Panel and the Materials Working Group, and stakeholder comments. The proposed rule also considered a petition for rulemaking submitted by the State of Washington. For additional information see the Discussion portion of the SOC.

The authority citation sections of the proposed rule contain the statutory authority for the proposed rule.

Description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply.

The proposed rule would affect about 300 NRC licensees and about 1,100 Agreement State licensees. This includes a wide range of licensees, including pool-type irradiator licensees; manufacturer and distributor licensees; medical facilities with gamma knife devices; self-shielded irradiator licensees (including blood irradiators); teletherapy unit licensees; radiographers; well loggers; broad scope users; radioisotope thermoelectric generator licensees; and licensees that ship or prepare for shipment category 1 or category 2 quantities of radioactive material. Some of these licensees would be considered small entities. In fiscal year 2008, about 26 percent of materials licensees qualified as small entities. Using the same percentage, 364 of the licensees that would be affected by the proposed rule would be considered small entities.

Description of the projected reporting, recordkeeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities that will be subject to the requirements, and the type of professional skills necessary for preparation of reports and records.

Licensees would be required to: (1) develop procedures for implementation of the security provisions; (2) develop a security plan that describes how security is being implemented; (3) conduct training on the procedures and security plan; (4) conduct background investigations for

those individuals permitted access to category 1 or category 2 quantities of radioactive material; (5) coordinate with LLEAS so the LLEAS would be better prepared to respond in an emergency; (6) conduct preplanning and coordination activities before shipping radioactive material; and (7) implement security measures for the protection of the radioactive material. Licensees would be required to promptly report any attempted or actual theft or diversion of the radioactive material. Licensees would be required to keep copies of the security plan, procedures, background investigation records, training records, and documentation that certain activities have occurred. For additional information on the requirements, see the SOC or the proposed rule text. No special skills are necessary for the preparation of reports or records.

The average licensee would have a one-time cost of approximately \$27,000 and an annual cost of approximately \$25,700 to fully implement the proposed rule. Much of this cost would result from the requirements to have procedures, conduct training, and to develop a security plan. Although not required by the various security orders, many licensees have already developed procedures and conducted training and may only require minor revisions; therefore, the actual cost for some licensees may be lower. Additional large costs are the weekly physical check of the category 2 sources and the annual program review. The NRC views that the weekly check is a vital part of the security program, particularly for materials that are used infrequently. The program review is important for licensees to review the effectiveness of the program and to ensure that requirements are being implemented. More information on the cost of the proposed rule is contained in the Regulatory Analysis.

Identification, to the extent practicable, of all relevant Federal rules that may duplicate, overlap, or conflict with the proposed rule.

Several U.S. Government programs involve fingerprinting and an FBI identification and criminal history records check. These include the National Agency Check; Transportation Worker Identification Credentials in accordance with 49 CFR 1572; Bureau of Alcohol, Tobacco, Firearms, and Explosives background check and clearances in accordance with 27 CFR 555; Health and Human Services security risk assessments for possession and use of select agents and toxins in accordance with 42 CFR 73; Hazardous Material security threat assessment for hazardous material endorsement to commercial drivers license in accordance with 49 CFR 1572; and Customs and Border Patrol's Free and Secure Trade Program. Any individual that has favorably undergone the background investigation required by these programs would be relieved from the background investigation elements of the proposed rule as long as the licensee has appropriate documentation. Any individual who has an active Federal security clearance would also be relieved assuming appropriate documentation is provided.

The Department of Transportation requires security plans for the transport of highway route control quantities of radioactive material in accordance with 49 CFR 172.800. This provision covers only a small portion of the category 1 and category 2 quantities of radioactive material covered by the proposed rule.

The NRC is not aware of any other relevant Federal rules that may duplicate, overlap, or conflict with the proposed rule.

Description of any significant alternatives to the proposed rule that accomplish the stated objectives of applicable statutes and that minimize any significant economic impact of the proposed rule on small entities, including alternatives considered, such as: (1) establishment of differing compliance or reporting requirements or timetables that take into account the

resources available to small entities; (2) clarification, consolidation, or simplification of compliance and reporting requirements under the rule for small entities; (3) use of performance rather than design standards; and (4) any exemption from coverage of the rule, or any part thereof, for such small entities.

As noted earlier, some of the licensees that would be impacted by the proposed rule are small businesses. The proposed rule would impose the minimum requirements that the NRC believes is necessary to adequately protect the public health and safety and the common defense and security. Therefore, the NRC could not grant relief to small entities to allow them to implement less effective measures. The proposed rule would provide some flexibility in the particular measures that a licensee could choose to employ. Licensees affected by the proposed rule have already implemented the bulk of the requirements in response to various security orders.

ENVIRONMENTAL ASSESSMENT AND FINDING OF  
NO SIGNIFICANT IMPACT  
FOR THE  
PROPOSED RULE  
AMENDING 10 CFR PARTS 30, 32, 33, 34, 35, 36, 37, 39, 51, 71, and 73  
PHYSICAL PROTECTION OF BYPRODUCT MATERIAL

Office of Federal and State Materials and Environmental Management Programs  
U.S. Nuclear Regulatory Commission  
November 2009

### Introduction and Background

The U.S. Nuclear Regulatory Commission (NRC) has long participated in efforts to address radioactive source protection and security. The terrorist attacks of September 11, 2001, however, heightened concerns about the use of risk-significant radioactive materials in a malevolent act. Such an attack is of particular concern because of the widespread use of radioactive materials in the United States (U.S.) by industrial, medical, and academic institutions. The theft or diversion of risk-significant quantities of radioactive materials could lead to their unauthorized use in a radiological dispersal device or a radiological exposure device.

Commission regulations provide requirements for the safe use, transit, and control of licensed material. A licensee's loss of control of risk-significant radioactive material, whether it is inadvertent or through a deliberate act, has the potential to result in significant adverse impacts that could reasonably constitute a threat to the public health and safety or the common defense and security of the U.S. After the attacks of September 11, 2001, the Commission determined that certain licensed material should be subject to enhanced security provisions and safeguarded during transport, and that individuals with unescorted access to risk-significant quantities of radioactive material should be subject to background investigations.

As part of the development process for the enhanced security measures, the NRC performed vulnerability assessments to identify gaps or vulnerabilities in security at various



licensed facilities. The assessments also considered the effectiveness and costs of certain physical protection enhancements. The results of the vulnerability assessments were used in the development of enhanced security orders. The security orders were issued using a graded approach, based on the relative risk and quantity of material possessed by the licensee. The NRC issued the first series of orders to panoramic and underwater irradiator licensees that possessed more than 370 Terabecquerels (10,000 Curies) of radioactive material (EA-02-249; June 6, 2003) (68 FR 35458; June 13, 2003). The next series of orders were issued to manufacturing and distribution (M&D) licensees (EA-03-225; January 12, 2004) (69 FR 5375; February 4, 2004). Subsequently, the NRC issued Increased Control Orders (EA-05-090; November 14, 2005) (70 FR 72128; December 1, 2005) to other licensees authorized to possess certain risk-significant quantities of radioactive material (category 1 and 2 quantities of radioactive material).

These security orders specifically addressed the security of byproduct material possessed in quantities greater than, or equal to, category 1 and category 2. The category 1 and category 2 thresholds are based on the International Atomic Energy Agency (IAEA) Code of Conduct<sup>1</sup>. The orders provide enhanced security measures for license verification before transfer of radioactive material, intrusion detection and response, use of security zones, access control, and coordination with local law enforcement authorities (LLEAs). The orders also contain requirements for the licensee to determine the trustworthiness and reliability of individuals permitted unescorted access to risk-significant radioactive materials. The determination is based upon a background investigation of the individual.

During the same time period, efforts were underway to enhance transportation security of category 1 and category 2 quantities of radioactive materials. The first set of transportation

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<sup>1</sup> International Atomic Energy Agency Code of Conduct on the Safety and Security of Radioactive Sources, IAEA, Vienna, 2004.

security orders was issued to licensees that might be expected to transport radioactive materials in quantities of concern (category 1 quantities) (EA-05-006; July 19, 2005) (70 FR 44407; August 2, 2005). Subsequently, the NRC issued orders (EA-05-090; November 14, 2005) (70 FR 72128; December 1, 2005) to other licensees authorized to possess category 1 and category 2 quantities of radioactive material. These Increased Control Orders mentioned above also contain requirements for transporting category 2 quantities of radioactive material.

These security orders specifically address the transportation security of byproduct material in quantities greater than, or equal to, category 1 and category 2. These additional security measures provide for enhanced security during transportation beyond the current regulations, including enhanced security in preplanning and coordinating shipments, advance notification of shipments to the NRC and States through which the shipment will pass, control and monitoring of shipments that are underway, trustworthiness and reliability of personnel, information security considerations, and control of mobile or portable devices.

In 2005, Congress passed, and the President signed, the Energy Policy Act of 2005 (EPAAct). The EPAAct amended Section 149 of the Atomic Energy Act (AEA) to authorize the Commission to require to be fingerprinted any individual who is permitted unescorted access to radioactive material or other property subject to regulation by the Commission that the Commission determines to be of such significance to the public health and safety or the common defense and security as to warrant fingerprinting and background checks. With this new authority, the Commission determined that individuals who have access to category 1 and category 2 quantities of radioactive material warrant fingerprinting and background checks. Reviewing an individual's fingerprint-based Federal Bureau of Investigation (FBI) criminal history records check is one of the important elements of the background check. This review can provide comprehensive information regarding an individual's recorded criminal activities within the U.S. and its territories and the individual's known affiliations with violent gangs or

terrorist activities. On October 17, 2006, the NRC issued orders to panoramic and underwater irradiator licensees (EA-06-248) (71 FR 63043; October 27, 2006), M&D licensees (EA-06-250) (71 FR 53046; October 27, 2006), and licensees making shipments of category 1 quantities of radioactive material (EA-06-249) (71 FR 62302; October 24, 2006) to require fingerprinting and FBI criminal history records checks for unescorted access to risk-significant quantities of radioactive material at their facilities. On December 5, 2007, the NRC issued orders to all other NRC licensees that possessed category 1 or category 2 quantities of radioactive material (EA-07-305) (72 FR 70901; December 13, 2007) to require fingerprinting and FBI criminal history checks for unescorted access to category 1 or category 2 quantities of radioactive material.

#### Proposed Action

The NRC is proposing to amend its regulations to create a new Part 37 and make conforming amendments to other NRC regulations to incorporate effective security measures for the protection of category 1 and category 2 quantities of radioactive material into the NRC's regulations. The NRC considers category 1 and category 2 quantities of radioactive material to be risk significant and, as such, believes that these materials warrant additional protection. The objective of this proposed rule is to provide reasonable assurance of preventing the theft or diversion of category 1 and category 2 quantities of radioactive material.

New requirements for background investigations and an access authorization program are proposed to ensure that individuals who have access to these materials have gone through background investigations and are determined to be trustworthy and reliable. New requirements are also proposed to establish physical protection systems to detect, assess, and respond to unauthorized access to category 1 and category 2 quantities of radioactive material. For transport of the radioactive materials, new requirements for recipient license verification;

preplanning and coordination of shipments; advance notification of shipments; notification of shipment delays, schedule changes, and suspected loss of a shipment; and control and monitoring of shipments are proposed. The proposed amendments would also include security requirements for shipments of irradiated reactor fuel that have a net weight of 100 grams or less of irradiated fuel, exclusive of cladding or other structural or packaging material.

The proposed action would neither authorize nor license the use of any radioactive materials; licensees and applicants would still need to comply with the NRC's licensing requirements before obtaining radioactive materials. The proposed amendments would impact any licensee that is authorized to possess category 1 or category 2 quantities of radioactive material. Approximately 1, 400 NRC and Agreement State licensees would be impacted.

#### Need for the Proposed Action

The requirements put in place by the orders supplement existing regulatory requirements. These additional requirements are primarily intended to provide reasonable assurance of preventing the theft or diversion of this risk-significant material. The orders provide the Commission with reasonable assurance that the public health and safety and the common defense and security are adequately protected given the current threat environment. Evaluating the basis for these orders and adopting the security requirements in a rule allows the NRC to impose these requirements on all current and future licensees without future regulatory action. Further, notice and comment rulemaking is an open process that allows for public participation.

Although these security requirements could continue to be imposed by orders, the existing regulations do not reflect current Commission policy or requirements. Amending the regulations allows the Commission to revise the security requirements in the orders and to

incorporate these requirements into the regulations where they apply to all current and future NRC licensees.

### Environmental Impact

This environmental assessment focuses on those aspects of the byproduct material security rulemaking where there is a potential for the requirements to affect the environment. This proposed action would impose new or modified security requirements on a number of the NRC's licensees, but in no case would this proposed amendment authorize the possession or use of radioactive material. Licensees would still be subject to the licensing requirements in the rest of the NRC's regulations. The NRC has concluded that there will be no significant radiological environmental impacts associated with implementation of the security rule requirements.

The security requirements would not result in changes to the systems in affected licensees' facilities that function to limit the release of radiological effluents. All systems associated with limiting the releases of offsite radiological effluents will therefore continue to be able to perform their functions, and as a result, there are no significant radiological effluent impacts. The standards and requirements applicable to radiological releases and effluents are not affected by the security rulemaking and continue to apply.

The principal effect of this action is to revise the governing regulations pertaining to byproduct material security and to make generically applicable security requirements similar to those previously imposed by the enhanced security orders. None of the revisions affect current occupational exposure requirements; consequently, the NRC has concluded that this action has no impact on occupational exposure.

The proposed action does not significantly increase the probability or consequences of accidents, nor result in changes being made in the types of any effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure.

With regard to potential nonradiological impacts, implementation of the rule requirements does not have a significant impact on the environment. Facility footprints should not change due to the proposed action. No construction of new structures is required to meet the requirement in the proposed rule. While the requirements of this rule could result in some licensees making modifications to their existing facilities, the NRC does not anticipate such modifications to have any significant environmental impact. In addition, the requirements do not affect any historic site and do not affect nonradiological plant effluents. Consequently, there are no significant non-radiological plant effluents. Therefore, there is no significant non-radiological environmental impact associated with this rule.

Accordingly, the NRC concludes that there is no significant environmental impact associated with the rulemaking action.

#### Alternatives to the Proposed Action

As an alternative to the proposed action, the NRC staff considered not taking the action (i.e., the no-action alternative). Not revising the security regulations results in no change in current environmental impacts since the requirements would result in no significant environmental impact. Therefore, taking no action results in no net change to the environmental impact. However, the no-action alternative would leave the existing security requirements in tact, and as such, the NRC's security requirements for category 1 and category 2 quantities of radioactive material would not reflect the requirements that the NRC has concluded are necessary for the

adequate protection of the public health and safety and the common defense and security. The no action alternative would require the NRC to issue security orders to any future licensees.

The NRC staff also considered a rulemaking that would require all licensees that are authorized to possess category 1 or category 2 quantities of radioactive material to implement the security measures instead only those licensees that possess the material as would be required by the proposed rule. This alternative would impact about 2,950 licensees. The actual security requirements would be similar and would have similar environmental impacts. From an environmental standpoint, neither rulemaking option is obviously superior to the other. The NRC has chosen the proposed action because it most closely matches the rulemaking objectives.

#### Alternative Use of Resources

There are no irreversible commitments of resources determined in this assessment.

#### Agencies and Persons Consulted

No agencies or persons outside the NRC were contacted in connection with the preparation of this draft environmental assessment. The NRC has sent a copy of the draft environmental assessment and the proposed rule to every State Liaison Officer and requested their comments on the environmental assessment.

#### Finding of No Significant Impact

Under the National Environmental Policy Act of 1969, as amended, and the NRC

regulations in subpart A of 10 CFR part 51, the NRC has determined that this proposed rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment and, therefore, an environmental impact statement is not required for this rulemaking. The proposed amendments are procedural in nature and would have no significant impact on the environment.

The determination of this environmental assessment is that there will be no significant impact to the public from this action. However, the general public should note that the NRC welcomes public participation. Comments on any aspect of the environmental assessment may be submitted to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attn: Rulemakings and Adjudications Staff.