NUREG-2155, Rev. 2 DRAFT

Implementation Guidance for 10 CFR Part 37, Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material

Draft Report for Comment

Office of Nuclear Material Safety and Safeguards

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Protecting People and the Environment

Implementation Guidance for 10 CFR Part 37, Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material

Draft Report for Comment

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ABSTRACT

The intent of this technical report is to provide guidance for applicants and licensees in implementing Title 10 of the *Code of Federal Regulations* (10 CFR) Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material." This document describes methods that the U.S. Nuclear Regulatory Commission finds acceptable for implementing the regulations.

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ABBREVIATIONS AND ACRONYMS

ADAMS	Agencywide Documents Access and Management System
AEA or Act	Atomic Energy Act of 1954, as amended
ALARA	as low as is reasonably achievable
Am	americium
ATF	Bureau of Alcohol, Tobacco, Firearms and Explosives
Be	beryllium
CDC	Centers for Disease Control
Cf	californium
CFR	*Code of Federal Regulations*
Ci	curie
Cm	curium
Co	cobalt
Cs	cesium
DHS	U.S. Department of Homeland Security
DHL	Dalsey, Hillblom, Lynn
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EGM	Enforcement Guidance Memorandum
FAST	Free and Secure Trade
FAX	Facsimile
FBI	Federal Bureau of Investigation
FedEx	Federal Express
FR	*Federal Register*
Gd	gadolinium
GPS	global positioning system
HR	human resources
IAEA	International Atomic Energy Agency
IDS	intrusion detection system
Ir	iridium
ISFSI	independent spent fuel storage installation
kg	kilogram
lb	pound
LLEA	local law enforcement agency

LLW	low-level radioactive waste
LVS	License Verification System
M&D	manufacturing and distribution
NEI	Nuclear Energy Institute
NLT	no later than
NRC	U.S. Nuclear Regulatory Commission
NSTS	National Source Tracking System
OCA	owner-controlled area
OGC	Office of the General Counsel
OMB	Office of Management and Budget
PA	protected area
PDF	portable document format
PII	personally identifiable information
Pm	promethium
Pu	plutonium
Q&As	questions and answers
Ra	radium
RAMQC	radioactive material in quantities of concern
RB	reactor building
RDD	radiological dispersal device
RED	radiation exposure device
RG	regulatory guide
RIS	regulatory issue summary
RO	reviewing official
RSO	radiation safety officer
Se	selenium
SENTRI	Secure Electronic Network for Travelers Rapid Inspetion
SGI	Safeguards Information
SGI-M	Safeguards Information—Modified Handling
SNM	special nuclear material
Sr	strontium
SSC	system, structure, and component
T&R	trustworthiness and reliability
TBq	terabecquerel
TCN	transaction control number

Th	thorium
TI	Temporary Instruction
Tm	thulium
TSA	Transportation Security Administration
TWIC	Transportation Worker Identification Credential
UPS	United Parcel Service
U.S.C.	*United States Code*
Yb	ytterbium

PURPOSE AND INTRODUCTION

This document provides guidance for implementing Title 10 of the *Code of Federal Regulations* (10 CFR) Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material." It is intended for use by applicants, licensees, and the U.S. Nuclear Regulatory Commission (NRC) staff, and it will also be available to Agreement States. The approaches and methods described in this document are not requirements. The NRC considers them to be acceptable approaches and methods of complying with the requirements in 10 CFR Part 37. Approaches and methods that differ from those given in this guidance document are acceptable if they satisfy the 10 CFR Part 37 requirements. Licensees are free to propose alternative ways of demonstrating compliance with these requirements.

This document provides guidance in the form of questions and answers (Q&As) for each section (and each subsection, as applicable) of the regulation. Except for definitions under 10 CFR 37.5, "Definitions," the section reference and its associated text appear in the box at the top of the page that begins each set of Q&As. A brief explanation of the rule text follows just below the box. The NRC intends the Q&As to give guidance on implementing the rule language in the box. This document provides Q&As for those definitions that are specific to 10 CFR Part 37.

An individual who accesses an electronic version of this guidance document can navigate more easily by clicking on the hyperlinks for each section listed in the Table of Contents. Hyperlinks also appear in responses to the questions to enable the reader to go directly to source material or sections of the rule referenced in the responses.

Certain States, called Agreement States, have entered into agreements with the NRC that give them the authority to license and inspect byproduct, source, and special nuclear materials, in quantities not sufficient to form a critical mass, which are used or possessed within their borders. Any licensee or applicant, other than a Federal entity, that wishes to possess or use licensed material in one of these Agreement States should contact the responsible officials in that State for guidance on implementing these regulations.

SUBPART A—GENERAL PROVISIONS

§ 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"

§ 37.1, "Purpose"

This part has been established to provide the requirements for the physical protection program for any licensee that possesses an aggregated category 1 or category 2 quantity 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.

EXPLANATION:

These regulations establish the security requirements for the possession, use, transfer, and transportation of aggregated Category 1 and Category 2 quantities of radioactive material.

Q&As:

Q1: What is the purpose of 10 CFR Part 37?

A1: The regulations in 10 CFR Part 37 impose security requirements for the possession and use of Category 1 and Category 2 quantities of radioactive material. These regulations establish the objectives and minimum requirements that licensees must meet to protect against theft or diversion. These requirements are intended to protect the public against the unauthorized use of a Category 1 or Category 2 quantity of radioactive material by reducing the risk of theft or diversion of the material.

Q2: Why is protection against sabotage not included in the purpose of 10 CFR Part 37?

A2: Protection against sabotage is not part of the purpose of 10 CFR Part 37 because the focus of the rule is to provide reasonable assurance of the security of Category 1 or Category 2 quantities of radioactive material by preventing unauthorized individuals from gaining access and committing theft or diversion.

In order to implement a risk-informed regulatory structure, numerous 10 CFR Part 37 requirements, however, provide some level of protection against sabotage, e.g. access control, although this is not the main purpose of these provisions. Sabotage related requirements in 10 CFR Part 37 include requiring licensees to determine if any actual or attempted sabotage or related suspicious activities have occurred, and to report them to the local law enforcement agency (LLEA) for a timely armed response, and to the NRC. In addition, licensees are required to conduct training for reporting of sabotage to the LLEA and the NRC.

Q3: What is a Category 1 or Category 2 quantity of radioactive material?

A3: The NRC considers Category 1 and Category 2 quantities of radioactive material to be risk significant, and these quantities refer specifically to 16 radioactive materials (14 single radionuclides and 2 combinations). These materials are americium-241 (Am-241), Am-241/beryllium (Am/Be), californium-252 (Cf-252), curium-244 (Cm-244), cobalt-60 (Co-60), cesium-137 (Cs-137), gadolinium-153 (Gd-153), iridium-192 (Ir-192), plutonium-238 (Pu-238),

plutonium-239/beryllium (Pu/Be), promethium-147 (Pm-147), radium-226 (Ra-226), selenium-75 (Se-75), strontium-90 (Sr-90), thulium-170 (Tm-170), and ytterbium-169 (Yb-169). Irradiated fuel and mixed-oxide fuel are not included even though they may contain Category 1 or Category 2 quantities of radioactive material; other regulations cover these materials. Table 1 of Appendix A, "Category 1 and Category 2 Radioactive Materials," to 10 CFR Part 37 provides the thresholds for these categories of radioactive material.

Q4: How do I know when I have an "aggregated" quantity of this radioactive material?

A4: See the Q&As related to the definition of "aggregated" under 10 CFR 37.5 and 10 CFR 37.47, "Security Zones."

Q5: What does it mean to say that "no provision of this part authorizes possession of licensed material"?

A5: This sentence simply clarifies that 10 CFR Part 37 establishes requirements only for the security of Category 1 or Category 2 quantities of radioactive material. These requirements are separate from the requirements for the issuance of a license to possess these, or any other, quantities of radioactive material. The regulations in 10 CFR Part 37 merely establish additional requirements for the secure possession of a Category 1 or Category 2 quantity of these materials.

Q6: I'm a mobile radiographer licensed to possess 60-curie (Ci) sources of iridium. These sources cannot easily be made into a weapon, and there are many better and more easily accessible choices for making a radiological dispersion device (RDD) or a radiation exposure device (RED). Why must I have a security program to secure this low-risk source?

A6: The NRC has determined that the Category 2 thresholds for the radioisotopes listed in Appendix A to 10 CFR Part 37, including Ir-192, are the levels that warrant additional protection measures. In addition, an interagency task force established by the Energy Policy Act of 2005 concluded in multiple reports to Congress and the President that the appropriate radioactive sources were being protected (see https://www.nrc.gov/security/byproduct/task-force.html for background on the task force and all submitted reports). The task force also concluded that the International Atomic Energy Agency (IAEA) Code of Conduct continues to serve as an appropriate framework for considering which sources warrant additional protection. For its 2018 report to Congress and the President, the task force reevaluated the list of radionuclides that warrant additional security and protection. The task force found "that the Category 1 and 2 quantities remain valid for sealed and unsealed sources as the list and threshold levels of radionuclides that could result in a significant RED or RDD event and therefore warrant enhanced security and protection."

Q7: Is there guidance with specific emphasis on physical security best practices that I may refer to for developing and implementing a 10 CFR Part 37 physical protection program?

A7: Yes**;** NUREG-2166, "Physical Security Best Practices for the Protection of Risk-Significant Radioactive Material," issued May 2014, provides technical guidance to NRC licensees and applicants on the appropriate use of various security measures to assist with developing and implementing a physical protection program for the protection of Category 1 and Category 2 quantities of radioactive material.

§ 37.3, "Scope"

§ 37.3(a)

Subparts B and C of this part apply to any person who, under the regulations in this chapter, possesses or uses at any site, an aggregated category 1 or category 2 quantity of radioactive material.

EXPLANATION:

This section establishes which licensees are subject to 10 CFR Part 37, Subpart B, "Background Investigations and Access Control Program," and Subpart C, "Physical Protection Requirements During Use."

Q&As:

Q1: Who must comply with Subpart B and Subpart C?

A1: Subpart B and Subpart C requirements apply to any licensee that possesses or uses an aggregated (see 10 CFR 37.5) Category 1 or Category 2 quantity of radioactive material at any site. This requirement applies to a wide range of licensees, including the following:

- pool-type irradiator licensees
- manufacturer and distributor (M&D) licensees
- medical facilities with gamma-ray stereotactic radiosurgery devices
- self-shielded irradiator licensees (including blood irradiators)
- teletherapy unit licensees
- radiographers
- well loggers
- broad-scope users
- radioisotope thermoelectric generator licensees
- fuel cycle licensees
- research and test reactors
- commercial power reactors
- some fixed gauge licensees
- licensees that ship or prepare for shipment a Category 1 or Category 2 quantity of radioactive material

- non-M&D service provider for which the service provider licensee has conducted a background investigation for the individual and approved the individual for unescorted access to Category 1 or Category 2 quantities of radioactive material" and the individual is granted unescorted access by a client licensee.

For additional Q&As on the applicability of Subpart B, see those in 10 CFR 37.21, "Personnel Access Authorization Requirements for Category 1 or Category 2 Quantities of Radioactive Material." For additional Q&As on the applicability of Subpart C, see those in 10 CFR 37.41(a).

Q2: Does 10 CFR Part 37, Subpart B, apply to non-M&D service provider licensees?

A2: The NRC has determined that 10 CFR Part 37, Subpart B, can apply to non-M&D service provider licensees. For the applicability of Subpart B to non-M&D service provider licensees, refer to NRC Regulatory Issue Summary (RIS) 2017-02, "Applicability of Title 10 of the *Code of Federal Regulations* Part 37 to Non-Manufacturing and Distribution Service Provider Licensees," dated February 8, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17023A159).

Q3: Do 10 CFR Part 37 requirements apply to unsealed radioactive material, as well as material sealed in a source or device? For example, do the requirements apply to materials possessed by a nuclear laundry or radioactive waste processor?

A3: Yes. The regulations in 10 CFR Part 37 apply to both sealed and unsealed radioactive materials in quantities equal to, or greater than, Category 2. No distinction is made between unsealed and sealed radioactive material when implementing 10 CFR Part 37 requirements.

For example, a nuclear laundry or radioactive waste processing licensee must implement these requirements if it possesses radioactive material in an aggregated quantity that meets or exceeds a Category 2 threshold.

Q4: How do I determine whether 10 CFR Part 37 applies to me?

A4: 10 CFR Part 37, Subparts B and C applies to any person who, under the regulations in this chapter, possesses or uses at any site, an aggregated Category 1 or Category 2 quantity of radioactive material. Subpart D of this part applies to any person who, under the regulations of this chapter:

(1) Transports or delivers to a carrier for transport in a single shipment, a Category 1 or Category 2 quantity of radioactive material; or

(2) Imports or exports a category 1 or category 2 quantity of radioactive material; the provisions only apply to the domestic portion of the transport.

See the Q&As related to the definition of "aggregated" and Category 1 and Category 2 quantities of radioactive material under 10 CFR 37.5 and 10 CFR 37.47.

§ 37.3, "Scope" (continued)

§ 37.3(b)

Subpart D of this part applies to any person who, under the regulations of this chapter:

(1) Transports or delivers to a carrier for transport in a single shipment, a category 1 or category 2 quantity of radioactive material; or

(2) Imports or exports a category 1 or category 2 quantity of radioactive material; the provisions only apply to the domestic portion of the transport.

EXPLANATION:

This section establishes which licensees and activities are subject to Subpart D, "Physical Protection in Transit," of 10 CFR Part 37.

Q&As:

Q1: Who must comply with Subpart D?

A1: Subpart D requirements apply to any licensee that transports, or delivers to a carrier for transport, a Category 1 or Category 2 quantity of radioactive material. A licensed importer or exporter of this material must comply with Subpart D and other applicable requirements in 10 CFR Part 37 only for the portion of the shipment carried out within the borders of the United States or its territories.

Q2: Are there any modes of transportation not covered by 10 CFR Part 37?

A2: Yes. The regulations in 10 CFR Part 37 do not address air or water transport. The Federal Aviation Administration regulates the transport of radioactive material within airports and by air. The U.S. Coast Guard regulates the transport of radioactive material within ports and by waterway.

The rule also does not address "transshipments" of Category 1 or Category 2 quantities of radioactive material through the United States. Transshipments are shipments that originate in a foreign country, pass through the United States, and then continue on to another country. However, the rule does address shipments across the United States that go to Hawaii, Alaska, or any U.S. Territory or Commonwealth.

The rule does not address the transport of spent fuel in excess of 100 grams (0.22 pounds) in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, which has a total external dose rate in excess of 1 gray (100 rad) per hour at a distance of 1 meter (3.3 feet) from any accessible surface without intervening shielding. This type of shipment must meet the requirements in 10 CFR 73.37, "Requirements for Physical Protection of Irradiated Reactor Fuel in Transit."

§ 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.

Q&As:

Q1: Does this definition of "access control" also cover individuals with access to information to be protected under 10 CFR 37.43(d)?

A1: No. This definition covers only the control of access to security zones, which are defined below as 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. However, the requirements for access to protected information are similar to those for unescorted access to security zones. To be granted access to information, personnel must be judged trustworthy and reliable and have a need to know.

Q2: If an individual has been granted unescorted access in accordance with 10 CFR Part 37, Subpart B, is the individual automatically granted access to protected information, or is the licensee required to evaluate the individual's need to know the information?

A2: For an individual who has been granted unescorted access to Category 1 and 2 materials, Safeguards Information (SGI), or Safeguards Information—Modified Handling (SGI-M), the licensee must also determine that he or she has a need to know the protected information in accordance with 10 CFR 37.43(d)(3)(i). For an individual who has not been granted unescorted access, the licensee must conduct a background investigation, determine that the individual is trustworthy and reliable, and determine that he or she has a need to know the information.

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

This definition is not specific to 10 CFR Part 37.

Aggregated means accessible by the breach of a single physical barrier that would allow access to radioactive material in any form, including any devices that contain the radioactive material, when the total activity equals or exceeds a category 2 quantity of radioactive material.

Q&As:

Q1: Does the definition of "aggregated" include unsealed sources and bulk material?

A1: Yes. The definition includes radioactive material "in any form." The intent is to include all material, whether it is in the form of a source (sealed or unsealed) or in a container of some sort, such as feed material that might be used to create a source.

Q2: If I have a single device containing one source with radioactive material that equals or exceeds a Category 2 quantity, is that source considered "aggregated" under this definition, even if I possess no other radioactive materials?

A2: Yes. Even if the licensee's source is inside a device, it must be considered aggregated under this definition because it contains a Category 2 or greater quantity of material that is accessible by the breach of a single physical barrier.

Q3: What is a physical barrier for purposes of aggregation and is it different than a physical barrier for a security zone?

A3: A physical barrier for both security zones and aggregation are essentially the same thing – natural or manmade structures or formations sufficient for the isolation of the material (for example, locked entry points).

A physical barrier for a security zone must be able to meet the regulatory requirements for security zones, such as restricting access to the security zone to only T&R'd individuals (for more information on security zone requirements, see the Q&As for 10 CFR 37.47.) A Category 2 or greater quantity of radioactive material that is able to be accessed by the breach of a single barrier is considered aggregated. Material aggregated to a Category 2 quantity or above is covered by Part 37 requirements, and that material must, therefore, be within a security zone.

If radioactive material is divided such that the breach of *more than one* physical barrier would be necessary for the material to reach or exceed category 2 quantities (in other words, where the material is not aggregated) and 10 CFR Part 37 does not apply, the physical barriers do not need to meet 10 CFR Part 37 requirements for a security zone, but the licensee must secure the material from unauthorized removal or access in accordance with 10 CFR 20.1801.

Q4: What does the "total activity" in the definition of aggregated refer to for radioactive material?

A4: "Total activity" in this definition refers to the activity of the radioactive material that would be accessible by the breach of a single physical barrier.

Q5: If a licensee is storing, using, or transporting radioactive materials that individually are below a Category 2 quantity, when would the radioactive materials be considered aggregated?

A5: If the total activity of the radioactive materials exceeds a Category 2 quantity when a single physical barrier is breached, the radioactive material is considered aggregated and 10 CFR Part 37 physical protection requirements must be implemented. For example, multiple sources in storage protected by a single barrier, that if breached, provides access to aggregated quantities of Category 2 material.

Q6: When I'm storing radioactive material, does the phrase "physical barrier" used in the definition of "aggregated" apply to each storage container or to the area within which I'm storing these containers?

A6: The phrase "physical barrier" may apply to either storage application, depending on the specific storage configuration of the radioactive material. For example, the physical barrier may apply to each individual storage container (such as a storage drum or locker) if it is secured so that it cannot be readily opened or readily moved, or to the area surrounding the storage containers (such as a storage room or fenced-in area). Individual storage containers that contain at least a Category 2 quantity of radioactive material must be provided adequate intervening physical barriers and stored in a security zone. For example, storage containers may have a lid or door secured with a lock or padlock, or be welded closed, and the containers are individually secured to the floor or wall with bolts, chains, or cables to prevent unauthorized removal when not under direct control and constant surveillance by the licensee and stored in a security zone. In another example, individual storage containers contain less than Category 2 quantities but collectively aggregate to a Category 2 or higher quantity and cannot be provided with adequate intervening physical barriers (e.g., the containers are drums that could be moved). In this storage configuration, individual containers that exceed a Category 2 quantity of radioactive material must also be stored in a security zone that provides a continuous physical barrier and access is allowed only through established access control points.

Q7: May I count each storage container that contains radioactive material below Category 2 quantities as having an independent physical barrier, thus preventing aggregation when the storage containers are located in an area together?

A7: If a licensee has several storage containers with radioactive material, without adequate intervening physical barriers, the quantity of the material in all the storage containers would be added together to determine if the total meets the thresholds of at least Category 2. The storage containers by themselves should not be considered an adequate intervening physical barrier if the material could be removed from the storage area (the designated security zone), for example, by tipping over drums and then rolling or lifting a locker and carrying the storage containers to an unsecured location. The licensee would then designate an appropriate security zone surrounding the storage containers with the aggregated Category 2 radioactive material.

Q8: When I'm storing a Category 2 or greater quantity of radioactive material in the form of multiple mobile devices inside a locked storage container or storage area, can each of these devices be considered a "physical barrier" under the definition of "aggregated"? If so, would the devices within that locked container or storage area be considered protected by at least two "independent physical controls" and meet the additional security requirement for mobile devices under 10 CFR 37.53(a)?

A8: The answer to both questions is No. The definition of "aggregated" specifically covers a Category 2 or greater quantity of radioactive material "in any form, *including any devices that contain the radioactive material*" [emphasis added]. The devices themselves cannot be

considered independent physical controls because, for the purpose of unauthorized removal, access to a mobile device is effectively the same as access to the material inside the device. In this case, the "physical barrier" in the definition of "aggregated" is the locked container or the locked room or cage surrounding the area within which the licensee stores these mobile devices. If this locked container, room, or cage is the only physical barrier to gaining access to the Category 2 or greater quantity of material in the devices, this material is "aggregated" under this definition. Therefore, under 10 CFR 37.53(a), the devices must be protected by at least one additional independent physical control when they are not under the direct control and constant surveillance of the licensee.

Q9: When I'm transporting several devices that individually are less than a Category 2 quantity, but together are more than that, does the phrase "physical barrier" used in the definition of "aggregated" apply to each device or only to the shipping container I use to transport the devices? That is, can I count the individual devices containing the material as barriers along with the shipping container, so that I would have more than one physical barrier and the shipment would not have to be considered aggregated?

A9: No. The concept of physical barriers does not apply to transportation. If someone steals a truck transporting sources, he or she would have access to all of the material, regardless of any shipping container barriers. Subpart D requirements apply if the licensee transports a Category 2 or greater quantity of material in a single conveyance.

Q10: If I conduct my licensed operations on a sufficiently large site, can I use the physical distance between the locations of my devices or materials as a physical barrier so that I would not have to consider them aggregated?

A10: Yes. However, the necessary physical distance separating the locations in which materials or devices or both are used or stored will vary for each licensee, and the burden will be on the licensee or license applicant to show that this distance is sufficient to qualify as a physical barrier. To demonstrate compliance, the licensee would probably need to consider such site-specific factors as follows:

- the continuous monitoring or integration of devices into the facility's operation in such a way that the removal of a device would provoke a prompt investigation and response
- the ease of moving the materials or devices or both
- the availability of tools and equipment, including vehicles, to accomplish this movement
- the likely minimum travel time from location to location
- the delay associated with these factors compared to the delay afforded by alternative physical barriers, such as a lock and chain or a lockable cage or room

To avoid unanticipated delays or changes in a facility's plans or operations, the licensee should consult its regulatory agency in advance about its intent to use physical distance as a physical boundary instead of waiting for an inspection to identify the issue. The licensee should also keep in mind that physical distance would not count as a physical barrier during the removal of sources from their devices for maintenance or replacement and when they are aggregated within a common physical barrier for temporary storage.

Q11: How far apart must my devices or materials be located for them not to be considered "aggregated"?

A11: No single minimum distance between locations of materials or devices can or should be prescribed in a regulation applied to all licensees' situations. As noted in the preceding Q&A, the licensee will have to identify the minimum distance that it believes should be counted as a physical barrier based on an analysis of site-specific conditions. The analysis will be subject to NRC inspection.

Q12: How do I know if I have an aggregated quantity of material?

A12: In accordance with 10 CFR 37.47(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. Therefore, licensees are expected to be aware of the activity of their sources, of the proximity of their sources to one another, and of whether there are barriers between the sources. These factors will help determine whether they have aggregated quantities of Category 1 or Category 2 material. See the guidance under the definitions of "Aggregated," "Category 1 quantity of radioactive material," and "Category 2 quantity of radioactive material" and the guidance in 10 CFR 37.41, 37.43, 37.47, and Table 1 in Appendix A to 10 CFR Part 37.

Q13: What do I need to do if I have an aggregated quantity of material?

A13: A licensee that has an aggregated quantity of material that has a total activity that equals or exceeds a Category 1 or Category 2 quantity of material must implement all the relevant requirements of 10 CFR Part 37.

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

This definition is not specific to 10 CFR Part 37.

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

Q&As:

Q1: Is an individual approved for access to radioactive materials automatically approved for access to information to be protected under 10 CFR 37.43(d) as well?

A1: No. To be approved for access to protected information, such an individual would have to meet the applicable requirements in 10 CFR 37.43(d) and have a need to know the information to perform his or her duties. Similarly, to be approved for unescorted access to

these materials, an individual approved for access to SGI would also have to need access to Category 2 or greater quantities of radioactive material to perform job-related duties.

Q2: Who approves an "approved individual"?

A2: The rule requires a reviewing official (RO) designated by the affected licensee to approve an individual for unescorted access to Category 1 or Category 2 quantities of radioactive material. The RO must determine that the individual seeking such access is trustworthy and reliable before granting that individual unescorted access. See the definition of an RO below.

Q3: What does it mean to be "trustworthy and reliable"?

A3: See the definition of "trustworthiness and reliability" (T&R) below and the Q&As pertaining to 10 CFR 37.25, "Background Investigations."

Q4: What does it mean to "complete" the training required by 10 CFR 37.43(c)? Does an individual have to pass a test to have successfully "completed" the training?

A4: To "complete" the training required by 10 CFR 37.43(c), the licensee's training program must include the training elements identified in 10 CFR 37.43(c)(i–iv). Completed training must ensure that those individuals implementing the security program possess and maintain the knowledge, skills, and abilities to carry out their assigned duties and responsibilities effectively.

Testing is not required; however, evidence that the trainee took and passed a reasonable test of the knowledge, skill, or ability objectives of the training is one possible measure of the likelihood that he or she will be able to carry out his or her assigned security responsibilities. No individual subject to the training requirements may be permitted unescorted access to a Category 1 or Category 2 quantity of radioactive material before completing the training requirements appropriate for that individual's potential job responsibilities. See the Q&As for 10 CFR 37.43(c).

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

See the Q&As for 10 CFR 37.25.

Becquerel (Bq) means one disintegration per second.

This definition is not specific to 10 CFR Part 37.

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.

This definition is not specific to 10 CFR Part 37.

Carrier means a person engaged in the transportation of passengers or property by land or water as a common, contract, or private carrier, or by civil aircraft.

Q&As:

Q1: Can a licensee be a carrier?

A1: Yes. Any "person" as defined in 10 CFR 30.4, "Definitions," may engage in transportation of radioactive materials as a common, contract, or private carrier.

Q2: What's the difference between a "carrier" and a "transporter," a term also used in this rule?

A2: There is no difference between the terms. For the purposes of this part, the NRC uses the terms interchangeably.

> *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. This is determined by calculating the ratio of the total activity of each radionuclide to the category 1 threshold for that radionuclide and adding the ratios together. If the sum 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 radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet.
>
> *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. This is determined by calculating the ratio of the total activity of each radionuclide to the category 2 threshold for that radionuclide and adding the ratios together. If the sum 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 radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet.

Q&A:

Q1: How do I determine whether I have a Category 1 or Category 2 quantity of radioactive material?

A1: The licensee should use the sum-of-fractions method, which is also known as the unity rule, to determine if it has a Category 1 or Category 2 quantity of radioactive material.

The licensee may need to implement 10 CFR Part 37 requirements even if it does not possess any single source or single radionuclide in excess of a Category 2 threshold. For combinations of materials (including sealed sources, unsealed sources, and bulk material) and radionuclides, the 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, the licensee must consider all the

radioactive material that it possesses at the site in question. The licensee may use the following formula for the unity rule to determine if it must implement the 10 CFR Part 37 requirements:

$$\sum_{1}^{n} \frac{R_n}{AR_n} \geq 1 \rightarrow \left[\frac{R_1}{AR_1} + \frac{R_2}{AR_2} + \ldots + \frac{R_n}{AR_n}\right] \geq 1.0,$$

Where:
R_1 = total activity for radionuclide 1
R_2 = total activity for radionuclide 2
R_n = total activity for radionuclide *n*
AR_1 = activity threshold for radionuclide 1
AR_2 = activity threshold for radionuclide 2
AR_n = activity threshold for radionuclide *n*

If the sum of these fractions is greater than or equal to 1, the licensee has at least a Category 2 quantity of radioactive material, and the 10 CFR Part 37 requirements would apply if this quantity is aggregated in a single location.

The terabecquerel (TBq) thresholds are the regulatory standard and must be used in all unity rule calculations. The licensee must therefore convert any Ci values in its license for sources and material to TBq as follows:

n (TBq) = *N* (Ci) x 0.037 TBq per Ci

See the examples included below.

Example 1: The licensee possesses the following materials:

5 TBq of Co-60 (bulk material)

5 TBq of Co-60 (sealed source)

20 TBq of Ir-192 (sealed source)

The Category 2 threshold is 0.3 TBq for Co-60 and 0.8 TBq for Ir-192. Using the sum-of-fractions formula ($R_1/AR_1 + R_2/AR_2 + R_3/AR_3 \geq 1.0$) and dividing the total quantities of Co-60 and Ir-192 by their Category 2 threshold quantities produces 58 as the sum of fractions as follows:

(5 TBq Co-60 + 5 TBq Co-60)/0.3 TBq + (20 TBq Ir-192/0.80 TBq) = 58

Because this sum is greater than 1, 10 CFR Part 37 requirements apply to this licensee. At a minimum, the licensee must apply the 10 CFR Part 37 requirements to the Co-60 and Ir-192 sources because each source individually is considered a Category 2 quantity. Depending on the location of the Co-60 in bulk form, the licensee may need to apply 10 CFR Part 37 requirements if it stores that bulk material with either source or if it stores all the bulk material together at one location surrounded by one physical barrier. However, if the licensee stores the

bulk material in several locations, such that each location contains less than 0.3 TBq with a physical barrier between locations, 10 CFR Part 37 requirements would not apply to the bulk material.

Example 2: The licensee possesses the following materials:

3 TBq of Sr-90 (bulk material)

0.5 TBq of Cs-137 (sealed source)

0.1 TBq of Am-241 (bulk material)

The Category 2 threshold is 10 TBq for Sr-90, 1 TBq for Cs-137, and 0.6 TBq for Am-241. Using the sum-of-fractions formula ($R_1/AR_1 + R_2/AR_2 + R_3/AR_3 \geq 1.0$) and dividing the total quantities of Sr-90 and Cs-137 by their Category 2 threshold quantities produces 0.97 as the sum of fractions as follows:

(3 TBq Sr-90/10 TBq) + (0.5 TBq Cs-137/1 TBq) + (0.1 TBq Am-241/0.6 TBq) = 0.97

Because this sum is less than 1, 10 CFR Part 37 does not apply to this licensee.

Example 3: The licensee possesses the following materials:

0.5 TBq of Cs-137 (unsealed source)

0.3 TBq of Am-241 (sealed source)

The Category 2 threshold is 1 TBq for Cs-137 and 0.6 TBq for Am-241. Using the sum-of-fractions formula ($R_1/AR_1 + R_2/AR_2 \geq 1.0$) and dividing the total quantities of Cs-137 and Am-241 by their Category 2 threshold quantities produces 1 as the sum of fractions as follows:

(0.5 TBq Cs-137/1 TBq) + (0.3 TBq Am-241/0.6 TBq) = 1

Because this sum equals 1, 10 CFR Part 37 requirements may apply. If the licensee stores the two sources together, they are considered aggregated. If the licensee stores the sources apart, but they are able to be accessed by the breach of a single barrier, the material is also considered aggregated. Material aggregated to a Category 2 quantity or above is covered by 10 CFR Part 37 requirements, and that material must be stored within a security zone. For each source protected by at least one independent physical barrier, 10 CFR Part 37 would not apply. See also the Q&As for the definition of “aggregated.”

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

This definition is not specific to 10 CFR Part 37.

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

This definition is not specific to 10 CFR Part 37.

Diversion 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.

Q&A:

Q1: What's the difference between diversion and theft?

A1: Both diversion and theft involve the unauthorized movement of radioactive material to an unauthorized destination. When an adversary is actively transporting an offsite shipment away from its intended destination, the two are indistinguishable. The common dictionary meaning of theft is the wrongful "taking and carrying away" or "removing" of property from its owner, implicitly requiring a movement off site. Also, under these definitions, theft implicitly requires continuing possession of the stolen material. By contrast, diversion, as defined here, does not require either offsite removal or continuous possession. The diverter, for example, could conceal the diverted material or device on site and leave it for later misuse by either the diverter or a colluding third party.

Escorted access means accompaniment while in a security zone by an approved individual who maintains continuous direct visual surveillance at all times over an individual who is not approved for unescorted access.

Q&As:

Q1: Does "accompaniment" mean that the escort must always be physically present when an individual who is not approved for unescorted access is in the security zone?

A1: Generally, yes, although an escort may monitor an unapproved individual remotely (e.g., using a closed-circuit TV system) as long as the escort maintains continuous direct visual surveillance over the individual at all times. Under some circumstances, such as when a patient undergoes teletherapy, when actual physical accompaniment of such an unapproved individual is not allowed under the as low as is reasonably achievable (ALARA) principle, remote surveillance would be the only alternative. However, remote visual surveillance should not be so remote as to interfere with the licensee's ability to detect, assess, and respond immediately to an actual or attempted theft, sabotage, or diversion of radioactive materials.

Within the security zone, an escort may monitor an individual who goes into a room if the escort is able to maintain continuous surveillance of the entry door and there is only one entrance or exit and no windows or ventilation ducts that the individual could access.

Q2: Does continuous "direct visual surveillance" have to be provided in person with the individual in your direct "line-of-sight"?

A2: No. The term continuous "direct visual surveillance" allows for the use of video surveillance. Video surveillance would be appropriate in some, but not all, cases. For example, video surveillance of patients during a treatment would be appropriate, considering the ALARA complications of having the escort physically present in the treatment room.

Q3: This definition of escorted access requires continuous direct visual surveillance only when an individual not approved for unescorted access is within a security zone. Aren't there circumstances under which this surveillance might be necessary when an unapproved individual is on site but outside the security zone?

A3: The NRC does not require the licensee to maintain direct visual surveillance outside the security zone. The licensee, however, may choose to escort unapproved individuals in this manner in any area of the facility that it deems appropriate. The agency requires direct visual surveillance only in cases in which an unapproved individual has access to a Category 1 or Category 2 quantity of radioactive material, and the security zone is effectively the area within which such access is controlled.

Q&A:

> *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.

This definition is not specific to 10 CFR Part 37.

> *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;

This definition is not specific to 10 CFR Part 37.

> *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;

This definition is self-explanatory and requires no Q&A.

Local law enforcement agency (LLEA) means a public or private organization that has been approved by a federal, state, or local government to carry firearms and make arrests, and is authorized and has the capability to provide an armed response in the jurisdiction where the licensed category 1 or category 2 quantity of radioactive material is used, stored, or transported.

Q&A:

Q1: Must an LLEA be a government entity?

A1: No. The LLEA may be any security force, including a private one, if it has Federal, State, or local government authority to carry firearms and make arrests. University police could be considered an LLEA under the definition because some university police departments are a fully badged and sworn police force with the authority to make arrests and provide an armed response. A railroad's police force with this authority also could be considered an LLEA.

See also the Q&As for 10 CFR 37.45, "LLEA Coordination," especially Q3–Q5 and A3–Q5 for 10 CFR 37.45(a).

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.

This definition is not specific to 10 CFR Part 37.

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.

Q&As:

Q1: What's the difference between portable and mobile devices for purposes of compliance with 10 CFR Part 37?

A1: No difference exists from the standpoint of compliance with 10 CFR 37.53, "Requirements for Mobile Devices." The same security requirements apply to both. The definition of "mobile device" for this rule encompasses all devices that can be "hand carried" that are mounted on wheels or casters or that are otherwise movable by an individual without additional equipment.

Q2: If I have a Category 1 or Category 2 quantity of radioactive material in a 200-liter (55-gallon) drum that isn't mounted on wheels or casters and can't be carried by hand, would the NRC consider this drum a "mobile device"?

A2: The drum would be considered mobile if it is not adequately secured (e.g., secured to a floor or wall with bolts, chains, or cables) and could be turned on its side and rolled to an unauthorized location outside an established security zone. In most cases, a loaded drum would likely require a hand truck, forklift, or other equipment for removal from an authorized place of use or storage. As a good practice, licensees should store hand trucks, forklifts, or other equipment that can be used for moving drums to a secure location away from storage areas for a Category 1 or Category 2 quantity of radioactive material.

Q3: If I have a Category 1 or Category 2 quantity of radioactive material in a container that isn't mounted on wheels or casters and that cannot be carried by hand, and if I secure it in a pickup truck bed or on a trailer, would the NRC consider this source or device "mobile"?

A3: Yes. The NRC would consider the source or device mobile because it would be "mounted on wheels" and "equipped for moving without a need for disassembly or dismounting" under this definition. A container or device on a pickup truck bed or on a trailer also would need to meet the requirement in 10 CFR 37.53(b). This subsection states that unless health and safety requirements for a site prohibit disabling the vehicle, the licensee must "utilize a method to disable the vehicle or trailer when not under direct control and constant surveillance by the licensee." Licensees subject to this requirement may not rely on the removal of an ignition key to meet the requirement. See the Q&As on 10 CFR 37.53.

> *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.

Q&A:

Q1: Must a single entity perform the various functions of the "movement control center," or may these functions be performed by separate departments or personnel?

A1: The movement control center definition does not require the same department or personnel to carry out all the functions. It does require an operations center or base from which all the functions are handled. To ensure the necessary degree of coordination and effectiveness, the movement control center may function more effectively under the control of a single organization managed by the individual who is responsible for the timely and effective execution of these functions. The primary purpose of the movement control center is to have staff members available who can immediately respond to an emergency and who can coordinate the required response. As specified in the definition, movement control center functions must, at a minimum, include maintaining current shipment position information, receiving and sending reports, and requesting and coordinating 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 6 hours after the estimated arrival time for shipments of category 2 quantities of radioactive material.

Q&As:

Q1: Does the no-later-than (NLT) arrival time apply to shipments with origins or destinations in a foreign country?

A1: No. An NLT arrival time must be established only for the domestic portion of a shipment for import or export (i.e., shipments with origins and destinations within the United States or its territories or possessions). These origins may include locations at which imported materials are cleared by U.S. customs authorities, and destinations may include terminal facilities for the export of the material.

Q2: The definition of NLT arrival time specifies that the NLT arrival time may not be more than 6 hours after the estimated arrival time for shipments of Category 2 quantities of radioactive material. What about Category 1 quantities?

A2: The requirement for an NLT arrival time does not apply to shipments of Category 1 quantities of radioactive material. For these shipments, each licensee shipping the material must establish a movement control center that must monitor shipments 24 hours a day, 7 days a week. In addition, the movement control center must be able to communicate immediately with the appropriate law enforcement agencies in an emergency. See the related Q&As under 10 CFR 37.75, "Preplanning and Coordination of Shipment of Category 1 or 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 DOE [U.S. 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.

This definition is not specific to 10 CFR Part 37.

> *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.

See the related Q&As for 10 CFR 37.23, "Access Authorization Program Requirements," paragraph (b).

> *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.

Q&As:

Q1: Must I find both "deliberate damage" *and* "malevolent intent" in order to report an incident as sabotage? Can't I presume malevolent intent if it's clear that the damage was deliberate?

A1: The licensee does not need to find both deliberate damage and malevolent intent to report suspected sabotage. If the licensee has determined that the damage was deliberate, it should not hesitate to report it as sabotage or vandalism, even if it has not yet found convincing evidence that the damage was malevolent. If the damage appears to have been deliberate and if it is severe enough to constitute an imminent and substantial danger to an employee or any member of the public, the licensee should report it to the LLEA immediately under 10 CFR 37.57(a), regardless of whether the damage might have been malevolent. In addition, regardless of any apparent malevolence, if the damage is severe enough to constitute an excessive radiation exposure to an employee or any member of the public, the licensee must report it to the NRC or appropriate Agreement State agency immediately under 10 CFR 20.2202, "Notification of Incidents." Note, too, that if a quantity of material greater than Category 2 has been lost or stolen, the licensee must report it to the NRC or appropriate Agreement State agency immediately under 10 CFR 20.2201, "Reports of Thefts or Loss of Licensed Material," regardless of whether the removal of the material was malevolent.

Q2: How can I determine, for the purposes of this part, that damage to material, a device, or security system component was "deliberate"? How can I determine whether the damage was "with malevolent intent"?

A2: To answer either question, the licensee should consider one or more of the following possible questions about its discovery of the damage: Could such severe damage have been accidental, or could it have been accomplished only by a trained individual who knew or should

have known the safety or security consequences and how to avoid them? If the licensee concludes that the damage was not accidental, it should also consider, at a minimum, the additional questions below:

- Have other suspicious or unexplained instances of damage to material, devices, or security equipment occurred in the past few weeks or months?
- Was the current incident immediately reported by the person who claims to have first discovered it?
- Was that person authorized to be at the site of the damage when it reportedly occurred?
- Was the damage severe enough to indicate that there was intent to degrade or disable the intended function of the damaged device or equipment?
- Does the damage affect safety or security?
- Does the damage appear to have required the efforts of more than one person?
- If the licensee is the first to discover the damage, does anything appear in the vicinity or elsewhere on the site to indicate an attempt to conceal the damage?
- Was there collateral damage to physical barriers or to monitoring or detection equipment necessary to permit successful forced access to the damaged material, device(s), or security or safety equipment?
- Did this or any other security equipment have to be defeated to gain access to the security zone?
- Is forced entry evident anywhere else on the premises, such as a broken window or jimmied door?
- If the perpetrator(s) was discovered in the act, was he or she armed? Did he or she resist or try to escape?
- Did the incident occur at night or during any other interval when the intruder could expect reduced security capabilities at the site?
- Could the perpetrator(s) have attained access to the security zone or security equipment without the help of a knowledgeable insider?

This list of questions is not exhaustive. Other circumstances may exist that prompt other kinds of questions to determine if the damage was deliberate or the intent was malevolent for the purposes of 10 CFR Part 37.

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.

Q&As:

Q1: Does a safe haven have to be approved by a Government entity, such as the State or local police? Do I have to get approval from anyone else, such as the owner or operator of a truck stop?

A1: No, safe havens do not have to be approved by a Government entity, such as the State or local police. The regulation in 10 CFR 37.75(a) requires only shipping licensees to identify safe havens during their preplanning for the shipment of a Category 1 quantity of radioactive material. See the related Q&As for 10 CFR 37.75(a) regarding safe havens.

Q2: Does "readily recognizable" mean that a truck transport crew has to be able to see a safe haven from the road?

A2: No. Although it would be preferable for the licensee to choose an easily recognized location, it may have to locate a safe haven in a forested area or on hilly terrain or to otherwise situate it in an area in which the physical features of the surrounding area may obscure all or part of the site. To be "readily recognizable," a safe haven needs only to be in a locale familiar enough to at least one member of the transport crew to enable him or her to know when the transport vehicle needs to turn or exit to reach the site and to know when the transport vehicle has arrived. This individual also should be able to guide local law enforcement or other assistance to the site by phone, if necessary.

Q3: Does "readily accessible" mean that the safe haven has to be along the road or right off an exit?

A3: No. Under this definition, a safe haven may be several miles from an exit or turnoff if it meets one of the definition's other criteria by having security present or by providing a site from which, in an emergency, the transport crew can notify and wait for the LLEAs.

Q4: What kind of "security" has to be "present" to satisfy this definition of safe haven? Does this mean that law enforcement agency personnel have to be on site?

A4: There is no requirement to have a specific type or number of security personnel or for law enforcement authorities present at a site for it to serve as a safe haven. Obviously, there are advantages to having trained security personnel, who are prepared to respond to an emergency, at the site of a safe haven. However, as noted in the definition, a safe haven also may be a site from which, "in the event of an emergency, the transport crew can notify and wait for the LLEAs."

Q5: What does the NRC mean when it defines safe haven as a "site"? Does a safe haven have to have a fence or other kind of recognizable property boundaries or be some kind of facility, even if only a parking lot, to meet the NRC's understanding of a "site"?

A5: No. If the site is readily recognizable and readily accessible, it needs only to meet one of the remaining two criteria in the definition: (1) it must be located in an area where security is present, or (2) it must be located in an area where the transport crew can, in an emergency, notify the LLEAs and more safely wait for them to arrive.

Q6: So, does this mean that a safe haven can be any place along the side of a road as long as there's an emergency?

A6: No, the side of the road is not typically considered a safe haven. Under 10 CFR 37.75(a)(2), as part of its preplanning before a shipment, the licensee must identify safe havens and coordinate shipment information with the Governor or the Governor's designee of any State through which the shipment will pass. A transport crew may have no choice but to pull to the side of the road in an emergency. However, this would not be a preshipment identified safe haven. Additional security is not likely to be present at these emergency stops, and the stops may not be in an area where it is possible for the transport crew to notify the LLEA and safely wait for the LLEA to arrive.

Q7: What conditions enroute would constitute an "emergency" requiring a safe haven under this definition? Would the NRC consider only a security incident, such as an armed attack or other malevolent interference with a shipment, to be an "emergency"? Or could an emergency be safety related or a mechanical problem requiring a prompt repair?

A7: An emergency could be any of these conditions and also could include severe weather or the sudden illness or incapacitation of the driver or other member of the transport crew. The key characteristic of an emergency that requires a safe haven under this definition is that the condition must result in an unexpected stoppage of the shipment. See also the pertinent Q&As for 10 CFR 37.75.

> *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.

Q&As:

Q1: What is the purpose of a security zone?

A1: A security zone is an area, defined by the licensee, that both isolates and controls access to Category 1 or Category 2 quantities of radioactive material to prevent and detect unauthorized access. The purpose of the zone is to define the area that contains the quantities of material that must be protected. A security zone effectively defines the area in which the licensee will apply the isolation and access control measures required by 10 CFR Part 37. Licensees must store and use all Category 1 and Category 2 quantities of radioactive material only within a security zone.

Q2: Are the characteristics different for "permanent" and "temporary" security zones?

A2: Both types of security zones must meet the same requirements. See the Q&As for 10 CFR 37.47; 10 CFR 37.49, "Monitoring, Detection, and Assessment"; 10 CFR 37.51, "Maintenance and Testing"; and 10 CFR 37.53.

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.

This definition is not specific to 10 CFR Part 37.

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.

Q&As:

Q1: How does the NRC define "departure" and "destination" locations?

A1: Although it is not defined in the rule, "departure" marks the location at which the carrier accepts the consignment of radioactive material for shipment and begins movement of the loaded transport vehicle. The location of departure is the site that is usually, but not always, controlled by the shipping licensee and from which the movement of the loaded transport vehicle begins. "Destination" denotes the location at which the receiving licensee accepts the shipment from the carrier and unloads, or authorizes the unloading of, the radioactive material specified in the accepted shipment documents from the carrier's transport vehicle.

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 security. A determination of trustworthiness and reliability for this purpose is based upon the results from a background investigation.

Q&As:

Q1: How can I or anybody really know whether an individual is "dependable" in judgment, character, and performance? What does the NRC mean by "dependable"?

A1: A judgment of any individual's dependability is inherently qualitative and not readily amenable to objective measurement or evaluation. Each individual has a temperament, personal history, and other characteristics that require a licensee's fairest subjective judgment about that individual's dependability, but the scope of this judgment is limited. For the purposes of this definition, the kind of dependability required is based on whether the individual can be trusted and relied on to comply with the licensee's security requirements, to sound an alarm whenever appropriate, and to do no willful harm when he or she is permitted solitary access to any location with an aggregated Category 2 or greater quantity of radioactive materials. In addition, under 10 CFR 37.23(e)(1), the judgment must be based on information produced from a background investigation that satisfies the requirements in 10 CFR 37.25.

In addition, the basis for a judgment about an individual's dependability is limited to the information available at the time. However, if at any time between a licensee's initial investigation and the 10-year reinvestigation, the licensee receives information that would call into question that individual's dependability for the purposes of this part, the licensee should not hesitate to reevaluate the basis for its earlier judgment. The regulation in 10 CFR 37.23(e)(4) specifically provides that an RO "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."

Q2: Are licensees required to conduct T&R determinations for access authorization for any other purpose besides unescorted access to Category 1 or Category 2 quantities of radioactive materials?

A2: Yes. In accordance with 10 CFR 37.27(a)(5), licensees may use the information obtained as part of a criminal history records check for determining an individual's suitability for access to SGI or SGI-M. Before granting an individual access to protected information, licensees are required to conduct a background investigation to determine T&R unless the individual has been authorized for unescorted access to Category 1 or Category 2 quantities of radioactive material, SGI, or SGI-M in accordance with 10 CFR 37.43(d)(ii).

Q3: Are there any differences in the background investigation to determine T&R for the purposes of granting access to protected information and granting unescorted access to Category 1 or Category 2 quantities of radioactive material?

A3: Yes. The background investigation for determining T&R to grant access to protected information does not include requirements for fingerprinting and a Federal Bureau of Investigation (FBI) identification and criminal history records check. All other elements of the background investigation required by 10 CFR 37.25(a)(2)–(a)(7) do apply.

Q4: What would constitute an "unreasonable risk" to the public health and safety or security for purposes of 10 CFR Part 37?

A4: An "unreasonable risk" in this context is a risk that granting the subject individual unescorted access to a Category 2 or greater quantity of radioactive material would result in theft, sabotage, or diversion of the material for a malevolent act that affects the public health and safety and the environment. See also the Q&As on 10 CFR 37.21; 10 CFR 37.23; 10 CFR 37.25; 10 CFR 37.27, "Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material"; and 10 CFR 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."

> *Unescorted access* means solitary access to an aggregated category 1 or category 2 quantity of radioactive material or the devices that contain the material.

Q&As:

Q1: Is a patient who is alone inside the boundaries of a security zone for teletherapy, but monitored remotely, considered to have unescorted access?

A1: The patient is not considered to have unescorted access if the remote monitoring permits direct and continuous surveillance and an immediate detection, assessment, and response to any unauthorized activity. Patients undergoing radiotherapy would generally be considered "accompanied" if they are under remote, but nearby, continuous visual surveillance. These patients are also typically in rooms with radiation alarms that are closely monitored visually from an adjacent room, and they are under direct visual surveillance to permit the licensee to effectively detect, assess, and respond immediately to an actual or attempted theft, sabotage, or diversion.

Q2: When must a person who is alone inside the boundaries of a security zone, but monitored remotely, be considered "solitary"?

A2: To be considered "solitary" under this definition, the individual (1) must be unaccompanied by an approved individual while inside the boundaries of a security zone, and (2) must not be under continuous direct visual surveillance at all times. See the definition of "escorted access." Licensees must ensure that all persons who meet these two conditions for solitary access are approved individuals.

An unapproved individual who is solely under direct visual surveillance by an approved individual at a central monitoring station that is remote from the subject security zone should generally not be considered "accompanied" under the definition of escorted access and, therefore, should be considered sufficiently solitary to require escorting or closer surveillance. Remote visual surveillance should not be so remote that it interferes with the licensee's ability to detect, assess, and respond immediately to an actual or attempted theft, sabotage, or diversion of radioactive materials. For example, depending on the configuration of a site's walls and doors, continuous surveillance from an adjoining room could be considered "accompaniment" if the approved individual who is continuously monitoring the unapproved individual could immediately warn that individual or could summon timely assistance nearby to prevent or stop an unauthorized act.

However, by this same operational criterion, continuous visual surveillance from another floor or a separate nearby building should not generally be considered "accompaniment," especially if other licensee personnel are not close enough to the unapproved individual to intervene promptly. For the same reason, remote surveillance from another offsite facility should not be considered "accompaniment" for purposes of escorted access under similar operating conditions.

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

This definition is not specific to 10 CFR Part 37.

§ 37.7, "Communications"

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

§ 37.7(a)

By mail addressed to: ATTN: Document Control Desk; Director, Office of Nuclear Reactor Regulation; Director, Office of New Reactors; or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001;

§ 37.7(b)

By hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland 20852.

§ 37.7(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; or by writing the Office of the Chief Information Officer, 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.

This discussion is self-explanatory and requires no Q&A.

§ 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.

EXPLANATION:

This text is self-explanatory.

Q&As:

Q1: Does 10 CFR 37.9, "Interpretations," mean I don't have to comply with an NRC regulatory requirement unless and until its meaning has been interpreted in writing by the NRC General Counsel?

A1: No. The licensee must comply with all applicable regulatory requirements in 10 CFR Part 37. This provision binds the Commission to a particular interpretation of its regulations only if the interpretation is written by the NRC General Counsel or is specifically authorized by the Commission in writing. The intent of this provision is to bind the NRC when the meaning of an NRC requirement is subject to differing and disputed interpretations. Having such a binding interpretation is not a precondition for the NRC's or Agreement State's enforcement of requirements with meanings that are plain or otherwise generally accepted. If a licensee has a question about the intended meaning of any requirement, and if this guidance does not clearly address its question, the licensee should make its question known to the NRC at its earliest convenience. The licensee may do so by contacting its nearest NRC regional office, listed in 10 CFR 30.6(b)(2).

§ 37.11, "Specific Exemptions"

§ 37.11(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.

EXPLANATION:

A licensee may ask the NRC for an exemption from a requirement in 10 CFR Part 37, or the NRC can unilaterally decide to exempt a licensee from a requirement. The NRC can grant exemptions as long as they are "authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest."

Q&As:

Q1: If a licensee wants to request an exemption from any requirement of the regulations, what does the licensee need to submit?

A1: A licensee can request an exemption from 10 CFR Part 37 requirements. The licensee should submit an amendment request that identifies the regulatory requirement for which it is seeking an exemption. The amendment request should explain why the licensee is requesting an exemption from the regulatory requirement and how any proposed alternatives will meet that regulatory requirement.

The NRC will evaluate the request and will determine if an exemption is appropriate. The NRC will grant only exemptions that 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." It is the licensee's responsibility to provide sufficient justification in support of its exemption request to enable the NRC to make its determination.

The NRC cannot grant exemptions from requirements mandated by law. For example, the NRC cannot provide an exemption from the fingerprinting and criminal history records check for unescorted access to Category 1 and Category 2 quantities of radioactive material because fingerprinting and criminal history records checks are specifically required by Section 149 of the AEA, as amended by Section 652 of the Energy Policy Act of 2005.

Q2: May I obtain an exemption from the access authorization program requirements if I implement alternative physical or administrative controls and training?

A2: A licensee may apply for an exemption from an access authorization program requirement. The Commission's discretion to grant an exemption from the access authorization requirements in Subpart B, however, is constrained by statute and a formal determination by the Commission. Under Section 149 of the AEA, the licensee must fingerprint "any individual" granted unescorted access to radioactive material subject to NRC regulation 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 unescorted access to material in Category 2 or greater quantities requires fingerprinting and background investigations. The Commission will not grant an exemption for this statutory requirement.

The requirements in 10 CFR Part 37 are designed to provide defense in depth for the security of aggregated quantities of radioactive material. No single measure can provide the same level of protection as that of all security measures integrated into a compliant program. Therefore, if the licensee will be aggregating radioactive material into a Category 2 quantity or greater, it must implement each applicable 10 CFR Part 37 requirement unless it can justify the need for an exemption and can obtain NRC approval.

§ 37.11, "Specific Exemptions" (continued)

§ 37.11(b)

Any licensee's NRC-licensed activities are exempt from the requirements of subparts B and C of this part to the extent that its activities are included in a security plan required by part 73 of this chapter.

EXPLANATION:

NRC licensees may protect the radioactive material covered by 10 CFR Part 37 under a security plan developed under 10 CFR Part 73, "Physical Protection of Plants and Materials."

Q&As:

Q1: If a contract radiographer licensee with material under a 10 CFR Part 37 security plan performs work with that material at a temporary jobsite located at a reactor or fuel cycle licensee that has a security plan approved under 10 CFR Part 73, which plan would apply?

A1: The materials licensee's 10 CFR Part 37 security plan would apply for the protection of the material. The materials licensee is responsible for meeting the requirements in 10 CFR Part 37 and the licensee's own security plan at a temporary jobsite, even if the temporary jobsite is at a licensed reactor or fuel cycle facility. However, in addition to the requirements in the materials licensee's security plan, the fuel cycle or reactor licensee also may impose other requirements to meet its security plan. For example, a contract radiographer licensee who brings a source onto a reactor site to conduct radiography activities may be subject to such additional reactor security requirements as personal and vehicle searches, access control to vital areas, and training.

Q2: If a 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," reactor licensee; 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material," fuel cycle facility; 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste," independent spent fuel storage installation (ISFSI); or a 10 CFR Part 50 research reactor licensee is also licensed under its respective license to possess an individual source, such as a dose calibrator that is at or above the Category 2 threshold, would 10 CFR Part 37 requirements apply for the security of the source?

A2: Yes, 10 CFR Part 37 applies. However, the licensee may protect the source under its approved 10 CFR Part 73 security plan, and the licensee would be exempt from the security provisions of 10 CFR Part 37 to the extent that its activities are included in a 10 CFR Part 73 security plan. If the source is in an area not covered by the 10 CFR Part 73 security plan, or the Part 37 activities are not covered by a Part 73 security plan, the licensee will need to develop a separate 10 CFR Part 37 security program. To ensure that all affected radioactive materials are covered by a security plan, the licensee should document which materials will be covered under 10 CFR Part 37 and which will be covered under 10 CFR Part 73. Refer to Subpart B of this document for additional Q&As concerning background investigations and access control, and refer to Appendix B for additional Q&As concerning security of sources under a 10 CFR Part 73 security plan.

Q3: Are activation products contained in, or part of, the reactor structure subject to 10 CFR Part 37?

A3: No. Activation products contained in the structure (such as the stainless steel lining of a reactor vessel, stainless steel bolts, or the reactor hull) would not be subject to 10 CFR Part 37 as long as these materials remain an integral component of a reactor. However, upon decommissioning of the reactor, waste generated from decommissioning may be subject to 10 CFR Part 37 if the waste meets or exceeds a Category 2 threshold. For example, shipments of decommissioned reactor components would be subject to Subpart D if their total activity met or exceeded a Category 2 threshold and if they weighed less than 2,000 kilograms (kg) (4,409 pounds (lb)). See 10 CFR 37.11(c) below.

§ 37.11, "Specific Exemptions" (continued)

§ 37.11(c)

A licensee that possesses radioactive waste that contains category 1 or category 2 quantities of radioactive material is exempt from the requirements of subparts B, C, and D of this part. Except that any radioactive waste that contains discrete sources, ion-exchange resins, or activated material that weighs less than 2,000 kg (4,409 lbs) is not exempt from the requirements of this part. The licensee shall implement the following requirements to secure the radioactive waste:

§ 37.11(c)(1)
Use continuous physical barriers that allow access to the radioactive waste only through established access control points;

§ 37.11(c)(2)
Use a locked door or gate with monitored alarm at the access control point;

§ 37.11(c)(3)
Assess and respond to each actual or attempted unauthorized access to determine whether an actual or attempted theft, sabotage, or diversion occurred; and

§ 37.11(c)(4)

Immediately notify the LLEA and request an armed response from the LLEA upon determination that there was an actual or attempted theft, sabotage, or diversion of the radioactive waste that contains category 1 or category 2 quantities of radioactive material.

EXPLANATION:

This section exempts radioactive wastes that contain Category 2 quantities or greater of radioactive material from the security requirements in Subparts B, C, and D of 10 CFR Part 37. Instead, the radioactive waste is subject to the security requirements in 10 CFR 37.11(c)(1)–(c)(4). However, if the waste contains discrete sources, ion-exchange resins, or activated material weighing less than 2,000 kilograms (4,409 pounds), the requirements in Subparts B, C, and D apply.

Q&As:

Q1: What radioactive material does the NRC consider "waste" for purposes of 10 CFR Part 37?

A1: As defined in 10 CFR 20.1003, "Definitions," "waste" means "those low-level radioactive wastes containing source, special nuclear, or byproduct material that are acceptable for disposal in a land disposal facility." For the purposes of this definition, "low-level radioactive waste," as defined in the Low-Level Radioactive Waste Policy Amendments Act of 1985 (NUREG-0980, "Nuclear Regulatory Legislation: 113th Congress," Volume 1, Number 11, "2nd Session," issued December 2015, page 313), means "radioactive material that…is not classified

as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material, as defined in Section 11e.(2) of the Atomic Energy Act of 1954 as amended through 1978."

Q2: What types of radioactive wastes are exempt?

A2: Radioactive waste with diffuse Category 1 or Category 2 quantities, as opposed to discrete sources, is exempt only from the requirements in Subparts B, C, and D of 10 CFR Part 37. These wastes, which contain items such as contaminated clothing, gloves, soil, or other waste with low specific activity, are instead subject to the requirements in 10 CFR 37.11(c)(1)–(c)(4) in Subpart A, "General Provisions," of 10 CFR Part 37. Radioactive waste that contains discrete sources, ion-exchange resins, and activated material that weighs less than 2,000 kg (4,409 lb) is subject to the requirements of Subparts B, C, and D of 10 CFR Part 37.

Q3: When are activated material and component parts considered to be waste? For example, if the walls (concrete, steel, etc.) become activated during use, does 10 CFR Part 37 apply?

A3: Walls and component parts that become activated throughout their life are not considered to be waste until they are no longer useful for their intended purpose. The regulations in 10 CFR Part 37 do not apply to activated material in walls and components during the operating life of a reactor, hot cell, or accelerator. Once the licensee has begun decommissioning and is dismantling the facility, the rubble and removed components would be considered waste, and 10 CFR Part 37 would then apply.

Q4: Does the 2,000-kg (4,409-lb) limit apply to the discrete sources and ion-exchange resins or just the activated material?

A4: This weight limit applies only to activated materials and does not apply to discrete sources and ion-exchange resins.

Q5: What is meant by discrete sources? Would a waste drum that contained multiple Category 3 sources that add up to a Category 2 quantity of radioactive material be exempt?

A5: As defined in 10 CFR 30.4, a discrete source "means a radionuclide that has been processed to purposely increase its concentration within a material for use in commercial, medical, or research activities." Waste that has been made radioactive incidentally by a process is not considered a discrete source. The drum would not be exempt because, in this example, it contains discrete sources. The licensee would need to protect the drum containing aggregated sources under 10 CFR Part 37.

§ 37.13, “Information Collection Requirements: OMB Approval”

§ 37.13(a)

The U.S. 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 3150-0214.

§ 37.13(b)

The approved information collection requirements contained in this part appear in §§ 37.11, 37.21, 37.23, 37.25, 37.27, 37.29, 37.31, 37.33, 37.41, 37.43, 37.45, 37.49, 37.51, 37.55, 37.57, 37.71, 37.75, 37.77, 37.79, and 37.81.

EXPLANATION:

This text is self-explanatory and requires no Q&A.

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"

§ 37.31, "Protection of Information"

§ 37.33, "Access Authorization Program Review"

§ 37.21, "Personnel Access Authorization Requirements for Category 1 or Category 2 Quantities of Radioactive Material"

§ 37.21(a), "General"

§ 37.21(a)(1)

Each licensee that possesses an aggregated quantity of radioactive material at or above the category 2 threshold shall establish, implement, and maintain its access authorization program in accordance with the requirements of this subpart.

§ 37.21(a)(2)

An applicant for a new license and 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 an aggregated category 1 or category 2 quantity of radioactive material.

§ 37.21(a)(3)

Any licensee that has not previously implemented the Security Orders or been subject to the provisions of this subpart B shall implement the provisions of this subpart B before aggregating radioactive material to a quantity that equals or exceeds the category 2 threshold.

EXPLANATION:

These provisions require licensees to have an access authorization program. New license applicants and licensees newly subject to 10 CFR Part 37 must implement this program before taking possession of aggregated Category 1 or Category 2 quantities of radioactive material. A licensee that has not previously implemented NRC security orders or has not been subject to the provisions of Subpart B must implement these provisions before aggregating radioactive material to a Category 2 or greater quantity.

Q&As:

Q1: Who is required to have an access authorization program?

A1: Any licensee that possesses an aggregated Category 1 or Category 2 quantity of radioactive material at a facility must have an access authorization program under 10 CFR 37.21(a). For first-time license applicants or those who are seeking a license amendment to authorize possession of an aggregated Category 2 or greater quantity of radioactive material, this means that the access authorization program must be in place before the licensee may possess the aggregated material. It also means that if a licensee must implement a security plan under Subpart C or implement the provisions of Subpart D of 10 CFR Part 37 for such aggregated quantities, the licensee will need to have an access authorization program as well. In addition, non-M&D service providers may have access authorization programs under Subpart B. See Q&A14 in the discussion of 10 CFR 37.21(c).

Q2: I do not currently possess a Category 1 or Category 2 quantity of radioactive material, but my license authorizes me to possess this quantity. Do I need to implement an access authorization program?

A2: No. If the licensee does not actually possess a Category 1 or Category 2 quantity of radioactive material, it does not have to implement an access authorization program. However, it does need to implement the program before it can take possession of that quantity and before it can aggregate the material at or above a Category 2 threshold.

Q3: I am already authorized to possess, at several separate locations, radioactive material that adds up to more than a Category 2 quantity, and I now need to aggregate this material at a single location. Will I need to implement an access authorization program?

A3: Yes. If a licensee plans to aggregate the material to a Category 2 or greater quantity, it will need to develop and implement an access authorization program before it can aggregate the material. The licensee will need to conduct a background investigation, including fingerprinting, for anyone who will have unescorted access to the aggregated Category 2 or greater quantity of radioactive material. These individuals will need to be approved for access before the material is delivered for aggregated storage at the single location. The licensee also should notify the appropriate NRC regional office that it will be implementing an access authorization program for the first time.

Q4: Will I be subject to Subpart B and need to have an access authorization program if I apply to amend my license to increase its possession limits to a Category 2 or greater quantity?

A4: If a licensee plans to possess a Category 2 or greater quantity of radioactive material that will be aggregated at one location, it must, under 10 CFR 37.21(a)(2), implement an access authorization program before obtaining the material. However, if the licensee plans to possess the material in less than Category 2 quantities at several locations, it does not need to establish or implement an access authorization program before obtaining the radioactive material.

§ 37.21, "Personnel Access Authorization Requirements for Category 1 or Category 2 Quantities of Radioactive Material" (continued)

§ 37.21(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.

EXPLANATION:

This provision establishes the general performance objective of the access authorization program.

Q&As:

Q1: What is the objective of the access authorization program?

A1: The main objective of the access authorization program is to ensure that individuals who have unescorted access to a Category 1 or Category 2 quantity of radioactive material are trustworthy and reliable and do not constitute an unreasonable risk to the public health and safety or security of the material.

Q2: How can I protect against an insider threat?

A2: The regulations in 10 CFR Part 37 require licensees to limit unescorted access to Category 1 or Category 2 quantities of radioactive material to approved individuals. Under 10 CFR 37.25 and 10 CFR 37.27, a background investigation that includes fingerprinting and an FBI criminal history records check must determine if an approved individual is trustworthy and reliable. In addition, under 10 CFR 37.43(c), the licensee must provide training to its staff. This training should, among other things, enhance its employees' and contractors' awareness of the requirements in 10 CFR 37.57(b) and 10 CFR 37.81(c) to assess and report, as appropriate, "any suspicious activity related to possible theft, sabotage, or diversion" of Category 1 or Category 2 quantities of radioactive material. Such activity could include unusual or suspicious behavior by employees or contractor employees with routine access to areas of the site or equipment related to the control of access to a security zone.

In addition, the rule establishes similar, but separate, controls on access to materials and access to information in security plans and procedures. Thus, a licensee may grant an approved individual unescorted access to the radioactive material while limiting or restricting that individual's access to items such as security system codes, monitoring system configurations, alarm system capabilities, and other information about the physical protection of the material. As with access to material, access to such information must be limited to individuals with a need to know who have been determined to be trustworthy and reliable in accordance with 10 CFR 37.43(d)(ii).

These complementary, but independent, sets of restrictions may not prevent a determined insider; however, they will reduce the risk of an individual with malicious intent gaining or enabling others to gain access to the radioactive material.

§ 37.21, "Personnel Access Authorization Requirements for Category 1 or Category 2 Quantities of Radioactive Material" (continued)

§ 37.21(c), "Applicability"

§ 37.21(c)(1)

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

§ 37.21(c)(1)(i)

Any individual whose assigned duties require unescorted access to category 1 or category 2 quantities of radioactive material or to any device that contains the radioactive material; and

§ 37.21(c)(1)(ii)

Reviewing officials.

§ 37.21(c)(2)

Licensees need not subject the categories of individuals listed in § 37.29(a)(1) through (13) to the investigation elements of the access authorization program.

§ 37.21(c)(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.

§ 37.21(c)(4)

Licensees may include individuals needing access to safeguards information-modified handling under part 73 of this chapter in the access authorization program under this subpart B.

EXPLANATION:

These provisions establish who is subject to the access authorization program.

Q&As:

Q1: Who is subject to the licensee's access authorization program?

A1: Individuals subject to a licensee's access authorization program include ROs and anyone whose assigned duties require unescorted access to a Category 1 or Category 2 quantity of radioactive material.

Unescorted access is defined as solitary access to Category 1 or Category 2 quantities of radioactive material or devices that contain this material. The term applies to anyone who, while in a security zone, is unaccompanied by an approved individual who maintains continuous direct visual surveillance at all times. See the Q&As for definitions of "unescorted access" and "escorted access" in 10 CFR 37.5. This would include an unaccompanied contract carrier or other contract service provider.

The licensee may accept the background investigation conducted by other licensees, such as service providers, if it receives appropriate documentation. However, the licensee still needs to make the determination that the individual requires unescorted access at its facility and that it accepts the documentation from the other licensee. The licensee will need to verify basic identification information before it can grant unescorted access to the individual, and the individual must complete the training required by 10 CFR 37.23(a)(2).

For road shipments, licensee drivers and accompanying individuals transporting Category 1 and Category 2 quantities of radioactive material are subject to the access authorization program if they have unescorted access to the material during transport. However, commercial drivers are not subject to the investigation elements in 10 CFR 37.25(a) of the access authorization program for road shipments of Category 1 and Category 2 quantities of radioactive material as listed in 10 CFR 37.29(a)(10). The NRC relies on U.S. Department of Transportation (DOT) and Transportation Security Administration (TSA) programs for background investigations for commercial drivers.

According to 10 CFR 37.77(f), movement control center personnel and any individual whose assigned duties provide access to shipment information on Category 1 quantities of radioactive material are subject to "protection of information" requirements in 10 CFR 37.43(d). These individuals may be, but are not required to be, included in the licensee's 10 CFR Part 37 access authorization program.

Q2: Why do individuals with unescorted access need to be subject to the access authorization program?

A2: Individuals who have unescorted access to a Category 1 or Category 2 quantity of radioactive material could pose a threat to the public health and safety or security because they could divert or steal risk-significant quantities of radioactive material or because they could aid others in the commission of such acts.

Q3: Am I required to subject all my employees to the access authorization program?

A3: No. If an unapproved individual has a job-related need to enter a licensee's security zone(s), the licensee has the option to escort that individual and not make a T&R determination with respect to that individual. However, each escort and any other individual with the need for unescorted access will need to undergo fingerprinting and a background investigation under 10 CFR Part 37 or under a comparable access authorization program that meets the requirements in 10 CFR Part 37.

Q4: You note above that unescorted access is defined under 10 CFR 37.5 as "solitary" access. If an unapproved individual is alone inside the boundaries of a security zone but monitored remotely, must he or she be considered "solitary" for purposes of the access authorization requirements of Subpart B?

A4: No. To be considered "solitary" under the definition of unescorted access under 10 CFR 37.5, the person must be unaccompanied by an approved individual while inside the boundaries of a security zone and must not be under continuous direct visual surveillance at all times. Remote visual surveillance can be considered an acceptable form of accompaniment if it is continuous and direct at all times; however, it should not be so remote that it interferes with the licensee's ability to detect, assess, and respond immediately to an actual or attempted theft, sabotage, or diversion of radioactive material. For example, depending on the configuration of a site's walls and doors, continuous surveillance from an adjoining room could be considered "accompaniment" if the approved individual continuously monitoring the unapproved individual could immediately warn that individual or could summon timely assistance from nearby to mitigate the potential consequences of an unauthorized act. By this same operational criterion, continuous visual surveillance from another floor or a separate nearby building should not generally be considered "accompaniment," especially if other licensee personnel are not near enough to the unapproved individual to make a timely intervention. For the same reason, remote surveillance from another facility off site should not be considered "accompaniment" for purposes of escorted access under similar operating conditions.

Q5: May other individuals (e.g., contract physicians, physicists, laboratory staff, housekeeping staff, or security or other staff) not actually using the device or material be authorized unescorted access to a device or radioactive material in a Category 2 or greater quantity?

A5: Yes. Other personnel (both licensee and nonlicensee) may have unescorted access to the security zone in which the licensee uses or stores the device or radioactive material if the licensee has determined that such personnel need to have unescorted access and have been approved after undergoing a background investigation that meets the requirements of Subpart B.

Q6: Do other individuals, such as contract physicians, physicists, and housekeeping staff, need to be fingerprinted even though they don't work directly with the radioactive material?

A6: Yes. These other individuals must be fingerprinted unless their access to the security zone is always escorted. In accordance with 10 CFR 37.21(c), all personnel (both licensee and nonlicensee) must be fingerprinted and undergo a background investigation if they have job duties that require unescorted access to a security zone in which the licensee uses or stores materials.

Q7: If the aggregated radioactive material is in a secured area within a room, is a T&R determination still required for people who need access to that room?

A7: The answer to this question depends on how the licensee defines the security zone. If the room itself is established as the security zone, the licensee must determine if an individual with a need to work in that room is trustworthy and reliable unless he or she is escorted at all times when in the room. However, if the licensee establishes the security zone as a smaller secured area within the room, it would not have to determine if the individual is trustworthy and reliable to access that part of the room outside the perimeter of the security zone.

Q8: During a source disconnect, would an individual coming in to provide source retrieval services be subject to the access authorization program? If this service individual works for

another company and if the company has performed a background investigation on the individual, may I accept that as adequate for my company?

A8: The answer is yes to both questions, unless the licensee escorts those individuals. During source retrieval operations, the licensee must escort individuals without a T&R determination but with a need for access. Alternatively, the licensee may accept a service provider licensee's background investigation if it implements 10 CFR Part 37 requirements. However, the service provider must provide the licensee with written verification of its employee's T&R under 10 CFR 37.29(a)(13). The written verification from the service provider licensee must include the name of each employee who will be providing the service and a statement that the employee has been determined to be trustworthy and reliable in accordance with the requirements in 10 CFR Part 37. The licensee must verify the identity of the employee and must document the basis of its determination. For the applicability of Subpart B to a non-M&D service provider, licensees refer to NRC RIS 2017-02.

Q9: Would individuals transporting radioactive material be subject to the background investigation requirements?

A9: Yes. For shipments of both Category 1 and Category 2 quantities of radioactive material that the licensee itself is transporting, the individuals transporting the radioactive material would be subject to the access authorization program because they would have access to the material during shipment. However, for road shipments of Category 1 and Category 2 quantities of radioactive material, 10 CFR 37.29(a)(10) and (a)(11) relieve commercial drivers and package handlers, respectively, from the background investigation elements of the access authorization program. These individuals are subject to DOT security requirements during transportation of radioactive material.

Q10: In our operation, practically everyone knows at least something about expected Category 1 shipments. Is a T&R determination required for everyone within the operation?

A10: No. However, the regulation in 10 CFR 37.43(d)(3) requires the licensee to make a T&R determination on every individual who is granted access to the security plan, implementing procedures, or list of individuals who have been approved for unescorted access. The individual must undergo a background investigation to determine T&R based on the requirements in 10 CFR 37.25(a)(2–7). The background investigation required for protection of information under 10 CFR 37.43(d)(3) does not include 10 CFR 37.25(a)(1) requirements for fingerprinting and an FBI identification and criminal history records check.

Q11: Is the RO subject to the access authorization program?

A11: Yes. The RO must undergo fingerprinting and a background investigation. See the Q&As on 10 CFR 37.23(b) for additional information on ROs.

Q12: May additional employees (e.g., new hires or existing employees changing positions within the company) who did *not* have unescorted access be granted unescorted access to a Category 1 or Category 2 quantity of radioactive material without undergoing fingerprinting and a background investigation?

A12: No. Before being granted unescorted access to material, all employees identified by the licensee as requiring unescorted access must undergo fingerprinting and background

investigation and must be determined to be trustworthy and reliable. The licensee may escort these individuals until a background investigation has been completed.

Q12: May an RO who authorizes access to SGI also approve individuals for access to radioactive materials?

A12: Yes. The regulations in 10 CFR Part 73 require that an RO conduct the background check review, but they do not specify who that individual must be nor list any qualifications for the position. A licensee may choose to use the same individual for SGI access under 10 CFR Part 73 and for unescorted access to materials under 10 CFR Part 37.

Q13: May service providers not associated with an M&D license be provided unescorted access to a Category 1 or Category 2 quantity of radioactive material at a customer facility?

A13: Yes. Service provider licensees may make a T&R determination for individuals who provide service at their customers' facilities. Service provider employees who have not been determined to be trustworthy and reliable must be escorted by an employee of the customer who is authorized to have unescorted access to the radioactive material or to the device that contains it. Refer to RIS 2017-02 for more information. See the Q&As on 10 CFR 37.29(a)(13).

Q14: Our industry is subject to three different Federal background check programs: Bureau of Alcohol, Tobacco, Firearms, and Explosives; the DOT; and the NRC. All three Federal agencies have different requirements, which can be very cumbersome, confusing, and costly.

Must I establish yet another background investigation program simply to comply with 10 CFR Part 37?

A14: The need for a separate background investigation program for 10 CFR Part 37 will depend on the specific requirements of the other applicable Federal agency background investigation program(s). If a licensee has a background investigation program for other activities at its site, and if that program also complies with the requirements of 10 CFR Part 37, the licensee does not need to create a separate program for the radioactive material subject to 10 CFR Part 37. However, the licensee will need to document how it uses specific elements of existing programs to implement each 10 CFR Part 37 requirement and why it expects that these elements will demonstrate compliance with each requirement.

Q15: Do individuals on an oil rig who actually manipulate the drilling tools have to be approved individuals for access control purposes under 10 CFR Part 37 if they are not employed by the licensee?

A15: No. They do not have to be approved individuals for access control purposes under 10 CFR Part 37 as long as an approved individual escorts these individuals or exercises direct control over the devices with radioactive material.

§ 37.23, "Access Authorization Program Requirements"

§ 37.23(a), "Granting Unescorted Access Authorization"

§ 37.23(a)(1)

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

§ 37.23(a)(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.

EXPLANATION:

Each licensee must implement the requirements in Subpart B of 10 CFR Part 37 before granting an individual unescorted access to Category 1 or Category 2 quantities of radioactive material.

An individual must also complete security training before exercising the unescorted access.

Q&As:

Q1: What additional NRC requirements must be met before allowing an individual unescorted access to a Category 1 or Category 2 quantity of radioactive material?

A1: In addition to the background investigation and determination of T&R, the individual must complete the security training required by 10 CFR 37.43(c) before being allowed unescorted access to the material. The individual must have an adequate understanding of his or her responsibilities. In addition, other applicable health and safety requirements (e.g., radiation safety training) may apply that the individual will have to meet before he or she is allowed unescorted access or can use the material.

§ 37.23, "Access Authorization Program Requirements" (continued)

§ 37.23(b), "Reviewing Officials"

§ 37.23(b)(1)

Reviewing officials are the only individuals who may make trustworthiness and reliability determinations that allow individuals to have unescorted access to category 1 or category 2 quantities of radioactive materials possessed by the licensee.

§ 37.23(b)(2)

Each licensee shall name one or more individuals to be reviewing officials. After completing the background investigation on the reviewing official, the licensee shall provide, under oath or affirmation, a certification that the reviewing official is deemed trustworthy and reliable by the licensee. Provide oath or affirmation certifications to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attn: Source Management and Protection Branch. The fingerprints of the named reviewing official must be taken by a law enforcement agency, Federal or State agencies that provide fingerprinting services to the public, or commercial fingerprinting services authorized by a State to take fingerprints. The licensee shall recertify that the reviewing official is deemed trustworthy and reliable every 10 years in accordance with § 37.25(c).

EXPLANATION:

Only ROs may make T&R determinations authorizing individuals to have unescorted access. ROs must themselves undergo background investigations, and the licensee must certify by oath or affirmation that the RO is trustworthy and reliable.

Q&As:

Q1: What is the role of the RO?

A1: The RO makes the T&R determinations for the licensee and determines who may be granted unescorted access authorization.

Q2: Who can be a reviewing official?

A2: The licensee decides who is named as an RO. The RO may be the radiation safety officer (RSO), someone from the human resources (HR) department, or any other individual. To review the FBI criminal history records, the RO must be a licensee employee, not a contractor. Also, the RO must be authorized for unescorted access to Category 1 or Category 2 quantities of radioactive material or access to SGI or SGI-M, but the RO does not have to actually be granted access to the material. In a small organization, the certifying officer who signs the license application often becomes the RO or designates the RO. In a larger organization, the certifying officer or another official may designate the RO or delegate the responsibility of

designating a RO to someone else. The person who designates the RO is responsible for performing the background investigation, certifying the RO as trustworthy and reliable, and providing the regulator with a certification of T&R under oath and affirmation as required under 10 CFR 37.23(b).

Q3: May the HR department be designated to perform the background investigations and be the repository for T&R determination records? If we have a process in place, may we continue to use that process? Does the RSO have to be involved?

A3: The review or record storage or both may be delegated to a licensee's HR department or any other appropriate department, depending on its mission and available resources.

Additionally, a licensee may use the information previously obtained through the hiring process or another background investigation process to support a T&R determination without having to reverify the information. However, the individual responsible for T&R determinations must also undergo fingerprinting and an FBI criminal history check, and the licensee must document the basis for concluding that its ROs are trustworthy and reliable.

The RSO does not have to be involved in T&R determinations. Because safety and security often go hand in hand, however, the RSO likely will need to be integrally involved in any implementation decisions.

Q4: Must individuals whose sole job duties are to determine eligibility for employment (e.g., HR specialists) undergo a background investigation and be determined to be trustworthy and reliable?

A4: No. Only the RO must undergo a background investigation and must be determined trustworthy and reliable because an untrustworthy RO could approve access by other untrustworthy individuals as part of a conspiracy to steal, sabotage, or divert radioactive material. However, the T&R determination may use relevant information obtained and evaluated by HR personnel when determining whether to hire an individual. If the HR staff does not make the T&R determination and if the licensee relies on the HR staff only to obtain information from the background check (e.g., employment history, education, and personal references), the HR staff does not have to undergo a background investigation.

Q5: How do I name an individual to be an RO?

A5: The licensee needs to submit the individual's name and fingerprints to the NRC. 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 must be the one to take the fingerprints of the individual(s) under consideration for an RO. After completing the background investigation of the candidate RO and upon determining that he or she is trustworthy and reliable, the licensee must provide, under oath or affirmation, a certification that it deems the RO to be trustworthy and reliable (refer to Annex C for an example of an affirmation letter). In accordance with 10 CFR 37.25, the licensee must also recertify that the RO is trustworthy and reliable every 10 years after his or her selection, Annex A, "Additional Guidance for Evaluating an Individual's Trustworthiness and Reliability for Allowing Unescorted Access to Certain Radioactive Material," at the end of the Q&As for this subpart, provides additional guidance for evaluating an individual's T&R for allowing unescorted access.

Q6: Where do I provide the certification that the RO is deemed trustworthy and reliable?

A6: The certification should be provided under oath or affirmation to the NRC at the following address:

Director, Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attn: Source Management and Protection Branch

The requirement to submit documents to the NRC under oath or affirmation may be satisfied by using a notary public to authenticate oaths or affirmations and to certify that the information provided is correct and true.

The *United States Code,* Title 28, Section 1746 (28 U.S.C. § 1746), presents an alternate method for complying with the oath or affirmation requirement. This method allows use of the following unsworn declaration to satisfy the oath or affirmation requirement: "I declare [or certify, verify, state] under penalty of perjury that the foregoing is true and correct. Executed on [date] [Signature]."

Q7: The regulation in 10 CFR 37.23(b)(2) requires that the fingerprints of the RO be taken by 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. This makes the licensee incur additional cost to travel to an authorized agency and fees to have the authorized agency take fingerprints. Why doesn't the rule allow the RO to be fingerprinted by the licensee's personnel?

A7: Because the RO has greater responsibility in the access authorization program and because he or she will be making the determinations to allow access, the NRC has determined that an independent entity must take the RO's fingerprints to ensure that the identification provided matches the person being fingerprinted. This requirement ensures the correct identification of the individual submitting the fingerprints. Without this requirement, the RO could substitute his or her own fingerprints with those of another individual who is known not to have a criminal history or terrorist ties.

Q8: How do I know that a new applicant for RO duties isn't someone who's been denied unescorted access in some other State and has just come to me for approval? Will the NRC or some other organization keep a registry of such applicants?

A8: If the licensee does an adequate employment history check and learns that the applicant worked for other licensees, it may be able to forestall this problem by specifically asking one or more of his or her most recent employers. If none of these previous employers are willing to provide information on previous denials of access authorization, the licensee may try to get information from friends, relatives, or other sources independent of the applicant's references under 10 CFR 37.25(a)(6). The licensee also may ask the applicant in a personal interview and look for nonverbal cues that may indicate that he or she is lying or withholding relevant information. The NRC does not have a system to track individuals who have been granted unescorted access or to track those who have been denied.

Q9: What if a licensee's reinvestigation of its RO, or new information from any source at any time between reinvestigations, prompts the licensee to revoke the RO's access authorization? Do all of his or her T&R determinations on other individuals since the previous investigation need to be redone?

A9: The answer to this question will depend on the kind of new information that the licensee obtains about the RO. For example, a discovery that the individual is on a no-fly list for suspected collaboration with a known criminal or terrorist organization should warrant a review of all his or her past T&R determinations or at least those dating from about the time that he or she was first put on such a list. The licensee is responsible for ensuring that only trustworthy and reliable individuals are authorized to have access to radioactive materials. The licensee's assessment of the extent of its potential security liability should include, but may not be limited to, such factors as the number of employees to whom the RO has authorized unescorted access since his or her last background check; the licensee's knowledge of the kinds and frequency of social, financial, familial, or romantic contact that the RO has had with any of these employees; and the timing of their access authorization approvals in relation to the timing of the event(s) that raised doubts about the former RO's T&R.

§ 37.23, "Access Authorization Program Requirements" (continued)

§ 37.23(b), "Reviewing Officials" (continued)

§ 37.23(b)(3)

Reviewing officials must be permitted to have unescorted access to category 1 or category 2 quantities of radioactive materials or access to safeguards information or safeguards information-modified handling, if the licensee possesses safeguards information or safeguards information-modified handling.

§ 37.23(b)(4)

Reviewing officials cannot approve other individuals to act as reviewing officials.

§ 37.23(b)(5)

A reviewing official does not need to undergo a new background investigation before being named by the licensee as the reviewing official if:

§ 37.23(b)(5)(i)

The individual has undergone a background investigation that included fingerprinting and an FBI criminal history records check and has been determined to be trustworthy and reliable by the licensee; or

§ 37.23(b)(5)(ii)

The individual is subject to a category listed in § 37.29(a).

EXPLANATION:

ROs must be permitted unescorted access to Category 1 or Category 2 quantities of radioactive materials or to SGI or SGI-M, if the licensee possesses this information. ROs may not approve other individuals to act as ROs. An RO does not need to undergo a new background investigation if he or she has already been determined trustworthy and reliable after a background investigation that included fingerprinting and a FBI criminal history records check. The RO will have to undergo a reinvestigation if the background investigation is older than 10 years after the date on which the last background investigation elements were last completed.

Q&As:

Q1: When may an RO make T&R determinations to permit unescorted access by employees?

A1: The RO may make T&R determinations for any employee who requires unescorted access only after the licensee has completed the required fingerprinting, FBI criminal history

records check, and background investigation of the RO and has certified to the NRC, under oath or affirmation, that the RO is trustworthy and reliable.

Q2: May I appoint multiple ROs?

A2: Yes. A licensee may appoint multiple ROs; however, each RO must undergo fingerprinting, a background investigation, and an FBI criminal history records check, and the licensee must certify, under oath or affirmation, that each RO is trustworthy and reliable. To review FBI criminal history records, each RO must be a licensee employee, not a contractor, because the U.S. Department of Justice has determined that FBI criminal history records information can be provided only to the NRC and Agreement State licensees.

Q3: The regulation in 10 CFR 37.23(b)(4) prohibits an RO from approving other individuals to act as ROs. May the incumbent RO do anything related to a licensee's nomination of another RO, or is the incumbent barred from providing any support?

A3: An approved RO may conduct the other aspects of the background investigation (10 CFR 37.25(a)(2)–(a)(7)) for an individual whom the licensee will nominate as an RO.

Q4: May a State official exempted under 10 CFR 37.29(a)(6) or (a)(7) serve as an RO for a State agency?

A4: Yes. A State official qualifying for relief from fingerprinting and other background investigation requirements under this subsection may serve as an RO, as could an individual covered by any of the other categories of relief. However, such a scenario is not likely to occur unless the official serves a State entity licensed by its Agreement State regulatory agency.

Q5: Why must ROs be permitted unescorted access to Category 1 or Category 2 quantities of radioactive materials or access to SGI or SGI-M if the licensee has this information?

A5: It is important that individuals making the final determination of T&R for others be trustworthy and reliable themselves. This means that ROs must undergo the same background investigation, including fingerprinting and FBI criminal records check, as individuals granted unescorted access to Category 1 or Category 2 quantities of radioactive materials, SGI, or SGI-M. If the RO is not fingerprinted, a potentially exploitable vulnerability could be created in the security program. The NRC's AEA authority to collect fingerprints applies to individuals who have unescorted access to radioactive material, SGI, or SGI-M. The RO must therefore be permitted, but not necessarily granted, access to radioactive material, SGI, or SGI-M to give the NRC the authority to require the collection of his or her fingerprints for submittal to the FBI for processing. However, the RO does not have to be granted access or will not need to actually use the unescorted access if the licensee determines that the RO has no need for unescorted access to perform a duty (e.g., an RO who works in the HR department with no additional requirements to perform duties related to safety or security of radioactive material in the security zone).

§ 37.23, "Access Authorization Program Requirements" (continued)

§ 37.23(c), "Informed Consent"

§ 37.23(c)(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 meet the requirements of § 37.25(b). A signed consent must be obtained prior to any reinvestigation.

§ 37.23(c)(2)

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

§ 37.23(c)(2)(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

§ 37.23(c)(2)(ii)

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

EXPLANATION:

Licensees may not begin a background investigation without the informed and signed consent of the subject individual. The subsection also requires a licensee to inform the subject individual of his or her right to correct inaccurate or incomplete information and to provide the subject an opportunity to correct information before the licensee makes an adverse T&R determination. If an individual withdraws consent to a background investigation, the licensee may not begin any new element of that investigation.

Q&As:

Q1: What is informed consent?

A1: Informed consent is the individual's authorization that allows the licensee to conduct the background investigation to determine if the individual is trustworthy and reliable. The licensee needs to explain to the individual that a background investigation is being conducted and then

explain the potential consequences if the individual does not agree to the background investigation. The signed consent shows that the individual has received the appropriate explanation and indicates his or her understanding that a background investigation will be conducted. The signed consent must include authorization to share personal information with other individuals or organizations, as necessary, to complete the background investigation.

Annex B, "Sample Consent Form for Background Investigations," to Subpart B provides a template for a possible consent form that a licensee can adapt for its use.

Q2: For individuals who have already been granted unescorted access under the various orders, does a licensee need to go back and obtain informed consent?

A2: No. The licensee does not need to go back and obtain informed consent from these individuals unless they have not already undergone a background investigation that included fingerprinting and an FBI criminal history records check. The licensee must obtain an informed consent before starting any new background investigation and before a reinvestigation of any currently approved individual.

Q3: How do I obtain informed consent from an individual?

A3: The licensee should first explain the informed consent process to the individual either orally or in writing. The easiest way to obtain the informed consent is to have a form with the necessary information that the individual can read and then sign and date. Annex B provides a template for a possible consent form.

Q4: What should I do if an individual withdraws his or her consent and I'm in the middle of his or her background investigation?

A4: If an individual withdraws his or her consent, 10 CFR 37.23(c)(2)(ii) requires the licensee to inform the individual that withdrawal of consent for the background investigation is sufficient cause for denial or termination of unescorted access authorization. The licensee may finish work on any elements of the background investigation that it had undertaken before the consent was withdrawn; however, the licensee cannot, under 10 CFR 37.23(c)(2)(i), initiate any additional elements that were not already in process.

Q5: If an individual withdraws his or her consent and I terminate the background investigation, may the individual be granted unescorted access to the material?

A5: No. If an individual withdraws consent for the background investigation and if that investigation is therefore never completed, the licensee would not have a basis for granting unescorted access to that individual.

Q6: May an individual who initially withdraws consent for a background investigation but later gives consent be granted unescorted access?

A6: Yes. If the completed background investigation supports the determination, the individual may be granted unescorted access. The initial withdrawal of consent would not, in itself, be sufficient grounds for denial.

§ 37.23, "Access Authorization Program Requirements" (continued)

§ 37.23(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.

EXPLANATION:

These provisions establish that individuals applying for unescorted access authorization must disclose their personal history information.

Q&As:

Q1: What is a personal history disclosure?

A1: The personal history disclosure is the information that the individual who is seeking unescorted access to Category 1 or Category 2 quantities of radioactive material must provide. It is the type of information typically collected on an employment application. The information should include items such as employment history, education, references, and any arrest record. It may also include, but is not required to include, information related to finances, such as bankruptcies. This information provides the RO with a starting point for the background investigation. See Annex A for additional information.

Q2: The personal history disclosure sounds like information provided for employment. May I use an employment application to gather the information?

A2: The information provided under a personal history disclosure is similar to information obtained by many companies in an application for employment. If the employment application contains adequate information, the licensee may use it for this purpose.

§ 37.23, "Access Authorization Program Requirements" (continued)

§ 37.23(e), "Determination Basis"

§ 37.23(e)(1)

The reviewing official shall determine whether to permit, deny, unfavorably terminate, maintain, or administratively withdraw an individual's unescorted access authorization based on an evaluation of all of the information collected to meet the requirements of this subpart.

§ 37.23(e)(2)

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

§ 37.23(e)(3)

The licensee shall document the basis for concluding whether or not there is reasonable assurance that an individual is trustworthy and reliable.

§ 37.23(e)(4)

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.

§ 37.23(e)(5)

Licensees shall maintain a list of persons currently approved for unescorted access authorization. When a licensee determines that a person no longer requires unescorted access or meets the access authorization requirement, the licensee shall remove the person from the approved list as soon as possible, but no later than 7 working days, and take prompt measures to ensure that the individual is unable to have unescorted access to the material.

EXPLANATION:

These provisions establish requirements for ROs to grant, deny, or withdraw an individual's unescorted access authorization. Licensees must document the reason that an individual is determined to be trustworthy and reliable and must maintain a list of individuals approved for unescorted access.

Q&As:

Q1: What information should the RO use to determine that an individual is trustworthy and reliable?

A1: The regulation in 10 CFR 37.23(e)(2) requires the RO to use all the information gathered during the background investigation to make a determination that an individual is trustworthy and reliable. The NRC expects licensees to use their best efforts to obtain this information. The licensee may use information previously obtained during the hiring process to support the T&R determination without having to reverify that information.

The RO may deny unescorted access to any individual based on any information obtained at any time during the background investigation that calls into question the individual's T&R. However, the licensee may not, under 10 CFR 37.27(b), 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 no information is available on the disposition of the case or (2) an arrest that resulted in dismissal of the charge or an acquittal. A record on the disposition of the case may not exist because information on a dismissal or acquittal may not have been recorded. Annex A lists some indicators that licensees should consider as potential T&R concerns.

Q2: How will we obtain all the information we need to complete a background investigation before granting unescorted access to an individual without a previous employment record (e.g., a recent high school or college graduate)?

A2: For new hires without an employment history, the licensee will need to rely more on other aspects of the background investigation, such as references. A lack of employment history does not need to be a negative consideration in determining if an individual is trustworthy and reliable and granted unescorted access to Category 1 or Category 2 quantities of radioactive material. The individual may be escorted until the licensee completes the background investigation and has made a determination on the individual's T&R for unescorted access.

Q3: What criteria do I use to determine trustworthiness and reliability?

A3: The NRC has not developed a set of criteria for determining T&R because no such list is likely to cover all licensees' needs, and each licensee is in the best position to weigh the many considerations that must support such determinations. Therefore, the licensee is responsible for making T&R determinations for all employees granted unescorted access. The background investigations under 10 CFR 37.25 are designed to identify past actions that might call into question an individual's T&R. Annex A lists some indicators that licensees should consider as potential concerns. Although the licensee should review this annex in its entirety, the following indicators are provided for convenience:

- impaired performance attributable to psychological or other disorders
- conduct that warrants referral for criminal investigation or that results in an arrest or a conviction
- indication of deceitful or delinquent behavior

- attempted or threatened destruction of property or life
- suicidal tendencies or attempted suicide
- illegal drug use or the abuse of legal drugs
- alcohol abuse disorders
- recurring financial irresponsibility
- irresponsibility in the performance of assigned duties
- inability to deal with stress or the appearance of being under unusual stress
- failure to comply with work directives
- hostility, aggression, or uncontrolled anger toward fellow workers or authority
- violation of safety or security procedures, or repeated absenteeism
- significant behavioral changes, moodiness, or depression

However, these indicators are neither meant to be all inclusive nor intended to be disqualifying factors. Licensees also may consider extenuating or mitigating factors in their determinations.

Q4: Are managers subject to the same background investigations?

A4: Yes. If a manager has unescorted access to the radioactive material, he or she is subject to the same background investigation requirements.

Q5: Are you requiring licensees to determine if employees are telling the truth?

A5: No. The regulation in 10 CFR 37.23(e)(1) requires licensees only to evaluate all the information collected to meet the requirements of this subpart and to document, under 10 CFR 37.23(e)(3), the basis for concluding whether reasonable assurance that an individual is trustworthy and reliable exists.

Q6: If someone has a drug or alcohol problem, does that automatically make him or her unreliable?

A6: The requirements in 10 CFR Part 37 do not require a drug or alcohol screening program to determine T&R, but licensees may use such tools. A drug or alcohol problem does not, in itself, make an individual unreliable. The licensee should evaluate all relevant information and consider any factors relevant to the drug or alcohol problem.

Q7: How should the T&R determination for my employees be documented?

A7: The regulation in 10 CFR 37.23(e)(3) requires that the documentation include the individual employee's or applicant's name and the basis for concluding if reasonable assurance

exists that he or she is trustworthy and reliable. The elements that the licensee is required to consider in making its determination appear in 10 CFR 37.25.

Because the basis for the licensee's determination is also the result of a process, a good documentation practice would include the criteria, procedures, and records that the licensee used to support its determination; the date of this determination; and the name and signature of the person responsible for making it (i.e., the RO). In cases for which the licensee has been unable to obtain adequate information on an element, such as a character and reputation determination, it should make this clear and should describe its efforts to gather the needed information.

The type of documentation may include a facsimile, voice mail, e-mail records, letters, photographs, film, audio or video tape, notes to a file, or anything else that the licensee used to support its determination. The form of the documentation may be an original or copy, may be on paper, may be electronic, or may be other types of media, as long as the record is legible for the required period and can be accessed. To discourage unauthorized alterations, electronic copies should, if possible, be read-only, such as those in portable document format (PDF).

Q8: If I can't obtain all of the information required in 10 CFR 37.25, may I still grant the individual unescorted access?

A8: Yes. If the licensee concludes that the individual should still be authorized for unescorted access based on other background investigation information, it may grant the individual unescorted access. The regulation in 10 CFR 37.23(e) requires the licensee to document the basis for its decision to grant unescorted access. If a previous employer, educational institution, or any other entity with which the individual claims to have been engaged fails to provide information at least 10 business days after the licensee's request, if such entities indicate an inability or unwillingness to provide information, or if the licensee is unable to reach the entity, the regulation in 10 CFR 37.25(a)(7) requires the licensee to document that and to attempt to obtain the information from an alternate source.

The licensee also has the option of escorting the individual and not making a T&R determination.

Q9: If I've determined someone to be trustworthy and reliable, and that individual later takes the material for malevolent use, what actions are expected of me? What liability do I assume because of my T&R determination?

A9: If nothing in the background investigation caused a licensee to deny access and if the licensee did everything that was required, it would not be in violation of the access authorization requirements. The licensee must provide reasonable assurance that persons granted access are trustworthy and reliable. If the licensee fails to provide that assurance, it will be in violation of the 10 CFR Part 37 requirements, and the NRC will consider enforcement action. However, providing assurance means that the licensee has made a reasonable effort, as required by 10 CFR Part 37, to ascertain T&R and has documented its actions.

Q10: Does the denial of unescorted access create legal liability for the licensee?

A10: Although the licensee should check the requirements of applicable State laws, the NRC does not consider a denial of unescorted access authorization to be a denial of employment.

The applicant may still work in areas of the facility outside of security zones or may perform escorted work within the facility. A denial only prevents the employee from having unescorted access to a Category 1 or Category 2 quantity of material.

Q11: How can we address the unique challenges related to establishing T&R for foreign nationals?

A11: Determining the T&R of foreign nationals, including students, does pose special challenges. An evaluation of academic and other references (e.g., transcripts, college applications, and financial aid applications) may form part of the basis for a T&R determination. A visa, in and of itself, does not provide an adequate basis for determining that the individual is trustworthy and reliable.

Background investigations are required to verify and develop information that supports the basis for the T&R determination. The regulation in 10 CFR 37.25(a)(6) requires licensees to obtain independent corroborating information to the extent possible. The 10 CFR Part 37 requirements incorporate the phrase "to the extent possible" to communicate the expectation that licensees will use their best effort to obtain the information required. However, if obtaining such corroborative information becomes impossible, and if the licensee concludes that the individual should still be authorized for unescorted access based on other background investigation information, it should be prepared to document its efforts to obtain the necessary information.

Q12: If I decide that one of my employees who was previously granted unescorted access to radioactive material should no longer have unescorted access, what actions can I take?

A12: The licensee should immediately revoke the individual's unescorted access. The licensee should document any change in access status with supporting information, take steps to remove any physical or electronic access, and remove the individual's name from the unescorted access list as soon as possible, but no later than 7 working days after access status changes. (See Q&A 13 below for additional information on requirements for timeliness of removal)

Q13: How quickly must I remove an individual from my list of those approved for unescorted access after I've determined that he or she no longer requires it?

A13: The regulation in 10 CFR 37.23(e)(5) requires the licensee to remove such an individual from its approved list as soon as possible but not later than 7 working days after it has determined that he or she no longer requires unescorted access to the radioactive material subject to this part. In addition, the regulation in 10 CFR 37.23(e)(5) requires the licensee to act promptly to ensure that the person is no longer able to have unescorted access. The licensee should have procedures to ensure that the individual responsible for the unescorted access list is promptly notified to remove a person from the list as soon as possible, but no later than 7 working days of the licensee determining that the individual no longer requires unescorted access or no longer meets the access authorization requirement.

Q14: Does my list of individuals who have been granted unescorted access need to include all employees and contractors who have been denied unescorted access?

A14: No. The list needs to include only those individuals to whom the licensee has decided to grant unescorted access. The list is not intended to include unapproved individuals who must be escorted.

Q15: Are there any other sources of information I should check before making a final determination on an individual?

A15: Yes. The licensee should check the NRC's list of escalated enforcement actions issued to individuals. The list includes individuals who are prohibited from working with radioactive materials. This list appears on the NRC's Web site at https://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/individuals/.

§ 37.23, "Access Authorization Program Requirements" (continued)

§ 37.23(f), "Procedures"

Licensees shall develop, implement, and maintain written procedures for implementing the access authorization program. The procedures must include provisions 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 procedures 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.

EXPLANATION:

These provisions establish requirements for written procedures for implementing the access authorization program.

Q&As:

Q1: As a licensee, am I required to have procedures for conducting background investigations?

A1: Although 10 CFR 37.23(f) does not specifically require procedures for conducting background investigations, it does require the licensee to develop, implement, and maintain written procedures for implementing the access authorization program as a whole. The NRC expects that the licensee would have procedures for conducting background investigations as an important component of the procedures for its access authorization program. For example, the regulations in 10 CFR 37.23(f) require that the licensee's procedures enable an applicant to review the outcome of the T&R determination, and under 10 CFR 37.23(e), the licensee's determination must be based on information produced from a background investigation. The licensee's procedures under this subsection must also address the notification of individuals denied authorization for unescorted access, must ensure that these individuals are informed of the grounds for the licensee's denial or termination of unescorted access authorization, and must provide such individuals an opportunity upon request to review the licensee's denial or termination and additional relevant information. Thus, the licensee should, as good practice, ensure that its procedures address its expectations for the performance and documentation of background investigations.

Q2: What procedures would you suggest for making T&R determinations?

A2: The NRC does not suggest specific procedures for making T&R determinations. However, licensees should generally consider developing procedures that address, among other things, how to conduct a background investigation; how to develop and document a determination basis, the criteria for when the licensee would accept another company's findings, and what information the licensee needs to verify; how to reinstate an individual; how to maintain the list of individuals approved for unescorted access; and how to withdraw an

individual's approved unescorted access. Procedures may differ in kind, sequence, structure, and level of detail as long as they produce the kinds of information and documentation required by 10 CFR 37.25 and 10 CFR 37.27.

§ 37.23, "Access Authorization Program Requirements" (continued)

§ 37.23(g), "Right To Correct and Complete Information"

§ 37.23(g)(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.

§ 37.23(g)(2)

If, after reviewing his or her 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.

EXPLANATION:

These provisions require the licensee to give individuals the right to complete, correct, and explain the information gathered for the T&R determination before it makes an adverse determination. The licensee must also allow these individuals the right to challenge that information before it makes an adverse T&R determination.

Q&As:

Q1: Why must I provide an applicant for unescorted access authorization the right to "complete, correct, and explain" the information I obtained during a background investigation before I make a final adverse determination (i.e., deny unescorted access)?

A1: An individual is given the right to review the record before any adverse determination because the information that the licensee is relying on to make that determination must be

complete, correct, and fully explained. The licensee does not want to make an adverse decision based on possibly incomplete or inaccurate information. Misinformation could be the result of a recordkeeping error, identity theft, or misidentification of another individual with the same or similar name. An individual also may have been charged with an offense of some type and later have been found not guilty or had the charges dropped, and the record might never have been updated to reflect this additional information. The individual might also be able to provide mitigating information that could be relevant to the licensee's decision.

Q2: May any of the background investigation information be challenged?

A2: Yes. The individual may request clarification of any information that he or she believes is incorrect. For some kinds of information, the individual may simply provide the licensee with what he or she believes is the correct information. The licensee may then consider the new information in its T&R determination process. However, the licensee should verify the corrected information, if possible.

Q3: What is the process for challenging criminal history records?

A3: If the individual believes that his or her criminal history records are incorrect or incomplete in any respect, he or she may initiate challenge procedures. These procedures would include direct application by the individual to the law enforcement agency that contributed the questioned information. An individual may also challenge the accuracy or completeness of any entry on the criminal history record by contacting the FBI at Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Division, ATTN: SCU, Mod. D-2, 1000 Custer Hollow Road, Clarksburg, WV 26306 Instructions for a challenge to the FBI appear in 28 CFR 16.30, "Subpart C" production of FBI Identification Records in Response to Written Request by Subjects thereof."."

The licensee may not make a final adverse determination based solely on the criminal history records until the licensee receives the FBI's confirmation or correction of the record.

Q4: How long must I allow for an individual to challenge my findings before I make a final determination to grant or deny authorization for unescorted access?

A4: The regulation in 10 CFR 37.23(g)(2) requires the licensee to allow at least 10 days for an individual to initiate action to challenge the results of an FBI criminal history records check, although it may allow more time. The licensee may use its judgment for other elements of the background investigation. The implementation procedures for the licensee's access authorization program should specify its timeframes for these challenges. In any case, the licensee may not make a final adverse determination based on the criminal history records until it has received the FBI's confirmation or correction of the record(s) that the individual has challenged.

§ 37.23, "Access Authorization Program Requirements" (continued)

§ 37.23(h), "Records"

§ 37.23(h)(1)

The licensee shall retain documentation regarding the trustworthiness and reliability of individual employees for 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

§ 37.23(h)(2)

The licensee shall retain a copy of the current access authorization program procedures as a record for 3 years after the procedure is no longer needed. If any portion of the procedure is superseded, the licensee shall retain the superseded material for 3 years after the record is superseded.

§ 37.23(h)(3)

The licensee shall retain the list of persons approved for unescorted access authorization for 3 years after the list is superseded or replaced.

EXPLANATION:

These provisions establish recordkeeping requirements for licensee access authorization programs.

Q&As:

Q1: What access authorization records am I required to retain?

A1: The NRC considers "documentation regarding the trustworthiness and reliability of individual employees" under 10 CFR 37.23(h)(1) to include all fingerprint and criminal history records received from the FBI, or a copy if the individual's file has been transferred, and all records from the other background investigation requirements under 10 CFR 37.25(a)(2) through 10 CFR 37.25(a)(7). The licensee also is required to retain any written confirmations received from entities concerning a Federal security clearance under 10 CFR 37.29(a)(12), any written confirmations received concerning a favorably adjudicated criminal history records check under 10 CFR 37.29(b), and any written verifications received from service providers under 10 CFR 37.29(a)(13). The licensee must also retain a record of its determination bases (reasons for granting or denying unescorted access) under 10 CFR 37.23(e)(3). The determination documentation must include the individual's name and should include the criteria, procedures, and supporting documentation that the licensee used in the process of making the determination for each individual); the date of the determination; and the name and signature of the RO responsible for making it. The licensee also is required to retain copies of the implementation procedures. See also the Q&As on 10 CFR 37.23(e).

Q2: What form of documentation do I need to keep for the access authorization program? Must I convert my paper documents to a digital format?

A2: No. The licensee may choose to scan paper and other documents into digital format for its own convenience and economy of storage space. However, this is not a requirement. The form of the documentation may be an original or copy, may be on paper, may be electronic, or may be in other forms of media as long as the record is legible for the required period and can be accessed. To discourage unauthorized alterations, electronic copies should, if possible, be read-only, such as those in PDF. If possible, the list should not be kept in real time; a revision history should be retrievable.

Q3: What procedures do I need to keep for the access authorization program?

A3: The regulation in 10 CFR 37.23(h)(2) requires the licensee to retain copies of all the procedures necessary to implement the access authorization program, including procedures for obtaining written consent, conducting the investigation and reinvestigation, correcting the record, challenging a determination to deny authorization for unescorted access, and documenting the final determination.

Q4: Do I need to keep any information relating to the lists of individuals approved for unescorted access other than the lists themselves?

A4: No. The regulation in 10 CFR 37.23(h)(3) requires the licensee to retain only a copy of the list of individuals who have current unescorted access to the material. When a list is updated, the previous list must be kept as a record for 3 years. The licensee does not need to retain other list-related records, although it will need to retain background investigation and determination-basis-related records for each individual on the list. Licensees with an automated or electronic process must ensure previous list of individuals approved for unescorted access are kept as a record for 3 years.

Q5: Must I also keep a list of individuals who have been denied access?

A5: No. The fact that someone is not included on the access list means that they should not be granted unescorted access to the material, and a list of individuals who have been denied access is not necessary.

Q6: How long must the records be maintained?

A6: The licensee must maintain background investigation records for 3 years after the individual no longer requires unescorted access to Category 1 or Category 2 quantities of radioactive material. The regulation in 10 CFR 37.23(e)(3) requires that these records also include those that provide the basis for the licensee's determination as to whether an individual is trustworthy and reliable for unescorted access authorization. The licensee must maintain the list of individuals approved for unescorted access authorization for 3 years after the list is superseded or replaced. The regulation in 10 CFR 37.23(h)(3) requires the licensee to retain a procedure for 3 years after it has been replaced with a new or revised version.

Q7: If a facility closes and the license is terminated, does the licensee need to keep records for an additional 3 years?

A7: No. Once the Commission terminates a license for any reason, the former licensee is no longer required under 10 CFR 37.103, "Record Retention," to maintain its records for the access authorization program, and these records may be destroyed. (See also 10 CFR 37.31, "Protection of Information," for requirements on the protection of personal information.)

§ 37.25, "Background Investigations"

§ 37.25(a), "Initial Investigation"

Before allowing an individual unescorted access to category 1 or category 2 quantities of radioactive material or to the devices that contain the material, licensees shall complete a background investigation of the individual seeking unescorted access authorization. The scope of the investigation must encompass at least the 7 years preceding the date of the background investigation or since the individual's eighteenth birthday, whichever is shorter.

EXPLANATION:

These provisions establish the requirement to conduct a background investigation for individuals who need unescorted access to Category 1 and Category 2 quantities of radioactive material.

Q&As:

Q1: How far back in time must I look into an individual's historical information as part of the background investigation?

A1: The scope of the investigation must encompass at least the 7 years preceding the date of the background investigation or since the individual's 18th birthday, whichever is shorter. To the extent possible, the licensee should look into an individual's history as far back as necessary to be satisfied that sufficient information is available to meet its criteria for determining T&R.

Q2: What are the components of a background investigation?

A2: A background investigation includes several components, including fingerprinting and an FBI identification and criminal history records check, verifications of the individual's true identity, a review of information obtained about the individual's employment history and education, and a character and reputation determination.

Q3: Why are background investigations and T&R determinations necessary?

A3: The background investigation is a tool to obtain information necessary to make decisions about whether an individual is trustworthy and reliable and may be permitted unescorted access to a Category 2 or greater quantity of radioactive material. The licensee must ensure that an individual who is seeking unescorted access to radioactive material is dependable in judgment, character, and performance such that unescorted access by that individual to Category 1 or Category 2 quantities of radioactive material does not constitute an unreasonable risk to the public health and safety or security.

A favorable T&R determination provides the licensee with reasonable assurance that the individual allowed unescorted access will not use the material for malicious purposes. This requirement goes beyond access control for radiation protection purposes and further limits access to only those individuals who have a legitimate need to access the licensed material or device.

Q4: Are these background investigation requirements equivalent to those used in nuclear power plants?

A4: No. Nuclear power plants have additional requirements, such as a credit history check, a psychological assessment, and a continuous behavioral observation program to determine an employee's T&R. (See 10 CFR 73.56, "Personnel Access Authorization Requirements for Nuclear Power Plants," and 10 CFR 73.57, "Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to a Nuclear Power Facility, a non-power reactor, or Access to Safeguards Information.")

Q5: How does a background investigation ensure trustworthiness and reliability?

A5: No background check can totally ensure that a person who is granted unescorted access will not use the material for malicious purposes. The required investigation, however, does provide information to determine with reasonable assurance that the individual is who he or she purports to be. It also provides the licensee with information as to whether the individual's character, reputation, and behavior might be adverse to the safe and secure operation of its facility. A background investigation can provide the licensee with a reasonable basis to determine that allowing an individual to have unescorted access to the licensed material would not constitute an unreasonable risk of a malevolent use of radioactive materials.

§ 37.25, "Background Investigations" (continued)

§ 37.25(a)(1)

Fingerprinting and an FBI identification and criminal history records check in accordance with § 37.27;

EXPLANATION:

This provision requires the background investigation to include fingerprinting and an FBI identification and criminal history records check.

Q&As:

Q1: Why is the NRC requiring fingerprinting and a criminal history records check for individuals to have unescorted access to Category 1 or Category 2 quantities of radioactive material?

A1: Section 149 of the AEA requires fingerprinting and an FBI identification and criminal history records check for the following:

> …any individual who is permitted unescorted access to radioactive materials 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.

The Commission determined that Category 1 and Category 2 quantities of radioactive material are of significance to the public health and safety or the common defense and security. Therefore, individuals who have access to Category 1 or Category 2 quantities of radioactive material must be fingerprinted.

Fingerprinting an individual for an FBI criminal history records check is an important element of the background investigation. It can provide comprehensive information on an individual's recorded criminal activities within the United States and its territories and on the individual's known affiliations with violent gangs or terrorist organizations. It is one element of the determination of T&R. See the Q&As for 10 CFR 37.27 for more detail.

Q2: Why hasn't the NRC established criteria for making a consistent determination on the finding of the fingerprint reports? Won't this lack of criteria result in inconsistent approval or denial of unescorted access authorizations for people who are trustworthy and reliable?

A2: The NRC considered a number of factors when it decided not to provide specific criteria for making decisions about ROs and authorizing unescorted access. Because the individual circumstances of each applicant may vary significantly, each licensee needs the flexibility to establish its own program. In addition, because the information obtained from employment history and other background checks may vary widely and because licensees may not be able to obtain sufficient information to determine compliance with all criteria, the licensee may not be

able to avoid using subjective judgment about an applicant in any case. Moreover, a single set of criteria for application to all cases may not be fair to some individuals who may otherwise be well qualified. For example, a criterion prohibiting the selection of a candidate with any criminal record that is less than 10 years old might disadvantage otherwise well-qualified candidates whom a licensee might prefer after considering the candidate's professional qualifications, employment history, character references, and other more recent information. Because the particular circumstances of each individual may vary significantly, each licensee needs the flexibility to establish its own program and use its own criteria.

Although a licensee is allowed to apply criteria that may be inconsistent with those of other licensees, the application of these criteria does not necessarily result in unfairness. For example, some licensees may be more comfortable with someone who has a criminal record, whereas other licensees may decide that, with an ample availability of other qualified applicants, an applicant with such a record may be employable but should not be allowed unescorted access to the licensee's radioactive material. A criminal record does not, by itself, mean that an individual is not trustworthy and reliable. The individual may have acknowledged his or her mistake and may now be a model citizen. In addition, a licensee may allow an individual unescorted access, but it may implement additional measures to oversee that individual (e.g., escort the individuals while they perform duties in a security zone during a probationary period).

The licensee is in the best position to decide what best fits its needs. Because each licensee will need to decide whether to trust an individual with its assets, it has the greatest stake in making a well-informed decision about the person best qualified to fill such a sensitive position. Thus, licensees should be allowed to develop their own criteria for these decisions.

Q3: May I use a contractor to process FBI criminal history record information to meet this requirement?

A3: No. In response to an NRC request for clarification concerning the use of contractors or other third parties for processing criminal history record information, the FBI analyzed the Commission's AEA authority in 1997 and concluded that the use of private contractors by the NRC and its licensees to receive and process FBI criminal history record information is prohibited.

§ 37.25, "Background Investigations" (continued)

§ 37.25(a)(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;

EXPLANATION:

This provision requires background investigations to include verification of the individual's true identity.

Q&As:

Q1: How does a licensee verify true identity?

A1: To verify the identity of an applicant for access authorization under this subsection, the employer must examine "official identification documents" to determine if they reasonably appear to be genuine and if they relate to the individual. The employer should compare the documents to information provided by the applicant. The employer should maintain document information and the certification of review as a record. The employer is not required to determine that the identification is authentic.

Q2: What documents may be used to verify identity?

A2: The licensee may use identity documents issued by a State or local government or by the Federal Government as long as they contain a photograph and information such as name, date of birth, gender, height, eye color, and address. These documents include passports, drivers' licenses, and identification cards issued by Government entities. The licensee may use one or more of the documentation types required by the U.S. Citizenship and Immigration Service's I-9 form to verify identity, which applicants use to apply for eligibility for employment.

§ 37.25, "Background Investigations" (continued)

§ 37.25(a)(3), "Employment History Verification"

Licensees shall complete an employment history verification, including military history. Licensees shall verify the individual's employment with each previous employer for the most recent 7 years before the date of application;

§ 37.25(a)(4), "Verification of Education"

Licensees shall verify that the individual participated in the education process during the claimed period;

EXPLANATION:

These provisions require verification of employment history and education as part of the background investigation.

Q&As:

Q1: Is the NRC defining 7 years of employment as "uninterrupted" service, or may there be breaks in service?

A1: There may be breaks in service. Under this subsection, however, a licensee must go back a minimum of 7 years unless the individual is younger than 25. (For an individual younger than 25, the licensee needs to go back only to the individual's 18th birthday.) If the individual has gaps in his or her employment record, the licensee should make its best effort to determine the activities of individuals while unemployed through methods such as reference checks or review of unemployment compensation records. If gaps in employment involved foreign travel, the licensee should inquire about the nature of the travel and involvement in activities or associations with others that could raise doubts about an individual's trustworthiness and reliability.

Q2: What kind of employment evaluation needs to be conducted if the employee has been with the licensee 7 years or more? Does the education verification need to be performed for a long-term employee?

A2: The licensee may use its own records of employment for an individual employed with the company more than 7 years; it does not need to check any previous employers. In addition, the licensee does not need to verify an individual's education if such education occurred more than 7 years ago. If the licensee performed the education verification as a part of the hiring process, it does not need to repeat this check.

Q3: What if a former employer refuses to provide the information I request?

A3: For interviews with past employers, the NRC understands that simple verbal confirmations of past employment and timeframe may be all the information a former employer is willing to provide on an individual. Although a simple confirmation of the nature and timeframe of past employment would not, by itself, enable a licensee to find an individual

trustworthy and reliable, it would constitute independent corroboration of the accuracy of the individual's information about that period of his or her employment.

§ 37.25, "Background Investigations" (continued)

§ 37.25(a)(5), "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. Unless other references are not available, 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;

EXPLANATION:

This provision requires the background investigation to include a determination of an applicant's character and reputation.

Q&As:

Q1: What constitutes a character and reputation determination?

A1: This is similar to a reference check for employment. The following questions provide examples that the licensee should consider asking when conducting the reference check:

- Would the organization rehire the individual?
- Would it trust the individual with company assets?
- Does it consider the individual to be trustworthy and reliable?
- Has it ever witnessed anything in the individual's behavior that would cause it to question his or her reliability?

A licensee may consider different kinds of information from a number of sources to make a determination about an individual's character and reputation so long as the information is clearly pertinent to the individual's likely conduct or behavior if he or she were granted unescorted access to any quantity of radioactive material subject to this part. In addition to records of any arrest or conviction as an adult or juvenile felon (if the juvenile conviction is retained in the adult record), examples of considerations pertinent to an individual's T&R may include, but need not be limited to, evidence of false or deceitful statements; loss of a license to drive; repeated high-speed traffic or other violations indicating a reckless disregard for the safety or security of others; a recent bankruptcy, foreclosure, repossession, or garnishment of income; repeated nonpayment of alimony, child support, or lawfully incurred financial obligations for periods of months; repeated instances of personal harassment; or conduct or behavior that would violate any part of the licensee's corporate or professional code of ethics or workplace conduct.

Q2: What criteria do I use to evaluate an applicant's character and reputation?

A2: The NRC has not developed a set of criteria for evaluating character and reputation because no such list is likely to cover all individuals' circumstances or all licensees' needs. Each licensee is in the best position to weigh the many considerations that must support such evaluations. In addition to the considerations listed in A1 above, Annex A includes some indicators of character and reputation that licensees should consider for possible T&R concerns.

Q3: Reference checks under this subpart "must be limited to whether the individual has been and continues to be trustworthy and reliable." What kinds of information are *not* to be considered relevant to an individual's trustworthiness or reliability?

A3: The "not relevant" category includes information about ethnicity; religious affiliation; ideology or political affiliation; sexual orientation; or membership in any organization that does not advocate, perpetrate, or otherwise support violence against persons, damage to property, or criminal activities, including hate crimes. Otherwise, the licensee may consider information about any action, behavior, or conduct that is dishonest, deceitful, a conflict of interest or otherwise unethical, or a violation of any law relevant to an individual's T&R.

Q4: This subsection provides that unless other references are not available, 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." Does this mean that a licensee may not interview or seek information from any member of a subject individual's family in the course of making a determination about that individual's character or reputation?

A4: No. A licensee may contact family members as a reference check if no other references are available.

§ 37.25, "Background Investigations" (continued)

§ 37.25(a)(6)

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

§ 37.25(a)(7)

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 or if the licensee is unable to reach the entity, the licensee shall document the refusal, unwillingness, or inability in the record of investigation; and attempt to obtain the information from an alternate source.

EXPLANATION:

These provisions require licensees to obtain, to the extent possible, background investigation information independent from that provided by the individual. Licensees must also document the refusal, unwillingness, or inability of a source to provide information.

Q&As:

Q1: What type of information is considered independent information to corroborate that provided by the individual?

A1: The licensee may obtain independent information through interviews with anyone who knows or previously knew the individual, such as teachers; friends; coworkers; neighbors; local members of a church, mosque, synagogue, club, or civic association of which the applicant is a member; or if no other references are available, family members. Although information obtained from independent sources may not, by itself, suffice to enable a licensee to find an individual trustworthy and reliable, it would constitute independent corroboration of the accuracy of the individual's information about that period of his or her life. It may also provide information that could support a decision not to authorize unescorted access.

Q2: What should I do if an individual or entity contacted as part of a background investigation refuses to respond?

A2: If a previous employer, educational institution, or any other entity fails to provide information or indicates an inability or unwillingness to provide information promptly, the regulation in 10 CFR 37.25(a)(7) requires the licensee to document the refusal, unwillingness, or inability to respond in the record of investigation. The licensee must then attempt to confirm the applicant's employment, education history, or other personal associations from at least one alternate source.

Past employers are often hesitant to say anything about a past employee for fear of being held liable. If the licensee receives any input from a former employer or other reference (even if he

or she refuses to comment), the licensee should document the conversation and take notes about what the former employer or reference said. If attempts to contact the reference fail after several tries, the licensee should make a note of that as well. A licensee may ask the individual for the name of another coworker or a second-line supervisor who may be willing to confirm employment.

Q3: Won't documenting my attempts to obtain information from uncooperative references and alternate sources of information under 10 CFR 37.25(a)(7) be excessive and time consuming?

A3: Not necessarily. Documentation may consist of an e-mail from such a reference or alternate source or a note to a file about an interview or phone conversation.

Q4: May I consider credit history as another source of "independent information" in an evaluation of an applicant's background?

A4: Yes. However, the licensee will need to comply with applicable State laws or local ordinances that prohibit employment discrimination based on credit history. Nothing in the NRC regulations prohibits a licensee from conducting additional types of checks, and the licensee may always use measures beyond the regulatory minimum required by the access authorization program.

§ 37.25, "Background Investigations" (continued)

§ 37.25(b), "Grandfathering"

§ 37.25(b)(1)

Individuals who have been determined to be trustworthy and reliable for unescorted access to category 1 or category 2 quantities of radioactive material under the Fingerprint Orders may continue to have unescorted access to category 1 and category 2 quantities of radioactive material without further investigation. These individuals shall be subject to the reinvestigation requirement.

§ 37.25(b)(2)

Individuals who have been determined to be trustworthy and reliable under the provisions of part 73 of this chapter or the security orders for access to safeguards information, safeguards information-modified handling, or risk-significant material may have unescorted access to category 1 and category 2 quantities of radioactive material without further investigation. The licensee shall document that the individual was determined to be trustworthy and reliable under the provisions of part 73 of this chapter or a security order. Security order, in this context, refers to any order that was issued by the NRC that required fingerprints and an FBI criminal history records check for access to safeguards information, safeguards information-modified handling, or risk significant material such as special nuclear material or large quantities of uranium hexafluoride. These individuals shall be subject to the reinvestigation requirement.

EXPLANATION:

These provisions relieve individuals who have been determined to be trustworthy and reliable under comparable NRC-required background investigations from further investigation.

Q&As:

Q1: If I have approved an individual for unescorted access under a previously issued NRC security order, do I need to conduct a new background investigation?

A1: No. The licensee does not need to conduct a new background investigation for employees who were granted unescorted access to Category 1 or Category 2 quantities of radioactive material or access to SGI under legally binding requirements issued by an Agreement State or the NRC. These previously approved individuals are considered to be grandfathered and, therefore, do not need a new background investigation to meet the new requirements. However, the individuals will need to undergo a reinvestigation 10 years after the initial determination, and that background investigation will need to meet 10 CFR Part 37 requirements for the reinvestigation.

Q2: Do you have grandfather provisions for relief from background investigations requirements for long-term employees not previously granted unescorted access?

A2: No. Long-term employees are not automatically grandfathered from background investigation requirements unless they have previously undergone a background investigation as discussed in A1 above or unless they fall under one of the categories of individuals granted relief from elements of the background investigation. See the Q&As on 10 CFR 37.29 for additional information on who may be relieved from fingerprinting.

Q3: I have an access authorization program compliant with 10 CFR Part 73. Do I need to reinvestigate individuals before I allow them to have unescorted access to Category 2 or greater quantities of my material?

A3: No. If the licensee has a 10 CFR Part 73 access authorization program, it may grandfather an individual under 10 CFR 37.25(b)(2) if it documents that he or she was determined to be trustworthy and reliable under 10 CFR Part 73 or an NRC security order that requires fingerprints and an FBI criminal history records check for access to SGI, SGI-M, or risk-significant material, such as special nuclear material or large quantities of uranium hexafluoride.

§ 37.25, "Background Investigations" (continued)

§ 37.25(c), "Reinvestigations"

Licensees shall conduct a reinvestigation every 10 years for any individual with unescorted access to category 1 or category 2 quantities of radioactive material. The reinvestigation shall consist of fingerprinting and an FBI identification and criminal history records check in accordance with § 37.27. The reinvestigations must be completed within 10 years of the date on which these elements were last completed.

EXPLANATION:

This provision requires background reinvestigations every 10 years.

Q&As:

Q1: Why is a reinvestigation required every 10 years?

A1: A reinvestigation every 10 years is necessary because an individual's criminal history may change over time in a way that can adversely affect his or her T&R. The 10-year period begins, as explained in 10 CFR 37.25(c), 10 years from the date the fingerprinting and FBI identification and criminal history records check elements were last completed.

Q2: What actions should I take if a reinvestigations is not completed within 10 years of the date on which the fingerprinting and FBI identification and criminal history records check were last completed for an individual granted unescorted access to Category 1 or Category 2 quantities of radioactive material?

A2: If a reinvestigations is not completed within 10 years of the date on which the fingerprinting and FBI identification and criminal history records check were last complete, the individual no longer meets the access authorization requirements. In accordance with 10 CFR 37.23(e)(5), the licensee must remove the individual from the approved access authorization list as soon as possible, but no later than 7 working days, and take prompt measures to ensure that the individual is unable to have unescorted access to the radioactive material until the reinvestigation is completed.

Q3: What elements are included in the reinvestigation?

A3: The reinvestigation is not a complete check. It is limited to fingerprinting and the FBI criminal history records check; it does not need to include identification through employment verification or the character and reputation determination. However, if the reinvestigation finds new information about a potentially adverse change in the individual's criminal records, the licensee may need to gather information from additional sources to consider whether to revise its previous determination about the individual's character and reputation.

Q4: Must I do a reinvestigation of an individual who qualified under 10 CFR 37.29 for relief from fingerprinting and background investigations, such as an individual approved under another Federal security review program?

A4: The relief provided by 10 CFR 37.29 does apply to the reinvestigation; however, the licensee will need to check and document that the individual still meets the relief category. If the affected individual has an approval that is still valid under another Federal security review program, the licensee does not need to conduct a reinvestigation. However, the regulation in 10 CFR 37.29(a)(12) requires the individual who was approved under the other Federal security review program to make available the appropriate documentation that he or she has an active Federal security clearance, and the licensee must receive written confirmation from the agency or employer that granted the Federal security clearance or reviewed the criminal history records check.

§ 37.27, "Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material"

§ 37.27(a), "General Performance Objective and Requirements"

§ 37.27(a)(1)

Except for those individuals listed in § 37.29 and those individuals grandfathered under § 37.25(b), 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.

EXPLANATION:

These provisions require licensees to fingerprint individuals who are to be permitted unescorted access and to submit the fingerprints to the NRC for transmission to the FBI.

Q&As:

Q1: May I work directly with the FBI without having to process the fingerprints through the NRC?

A1: No. The NRC does not have the authority to allow licensees to submit fingerprints directly to the FBI instead of submitting them through the NRC. Section 149 of the AEA requires that "fingerprints obtained by an individual or entity as required [in this section] be submitted to the Attorney General of the United States through the Commission for identification and a criminal history records check." The NRC recognizes that some licensees may work directly with the FBI to process fingerprints to meet other requirements for criminal history checks. However, to meet the requirements in 10 CFR Part 37, the licensee must still process fingerprints through the NRC to the FBI unless the individual is covered under a relief category in 10 CFR 37.29.

Q2: May an applicant submit fingerprints before the license is issued?

A2: Yes. An applicant will be given a docket number and can submit fingerprints to the NRC using that docket number.

§ 37.27, "Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material" (continued)

§ 37.27(a), "General Performance Objective and Requirements" (continued)

§ 37.27(a)(2)

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

§ 37.27(a)(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:

§ 37.27(a)(3)(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

§ 37.27(a)(3)(ii)

The previous access was terminated under favorable conditions.

§ 37.27(a)(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, access to safeguards information, or safeguards information-modified handling 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(c).

§ 37.27(a)(5)

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, or safeguards information-modified handling.

EXPLANATION:

These provisions establish requirements for reinstatement of unescorted access authorizations and for the use of information from previous background investigations.

Q&As:

Q1: Am I obligated to tell an individual why he or she is being fingerprinted?

A1: Yes. The regulation in 10 CFR 37.27(a)(2) requires the licensee to inform the individual that his or her fingerprints will be used to conduct a criminal history records check.

Q2: How should I inform the individual?

A2: The licensee may inform the individual orally or in writing. However, the licensee must obtain signed consent to conduct the background investigation. See also the Q&As on 10 CFR 37.23(c).

Q3: If an employee who has unescorted access quits and then returns, does the licensee need to fingerprint the individual again?

A3: If the employee has been gone for 365 days or less, had left under favorable conditions, and had previously undergone fingerprinting and an FBI criminal history records check, he or she will not need to be fingerprinted again. However, if the individual's unescorted access had been terminated for cause, the individual will need to be fingerprinted again.

Q4: Do I need to obtain fingerprints of service provider licensees and other individuals who have been granted unescorted access by the service provider or other licensee?

A4: No. The licensee does not need to obtain fingerprints of individuals employed by a service provider licensee if that licensee meets the requirements in 10 CFR Part 37. Employees of these service provider licensees who work at a customer's facility need not go through the customer's process for determining T&R for granting unescorted access. If the service provider licensee has already made its own determination of T&R for its employees, the service provider licensee may instead provide its customers with certification of an individual's T&R for being granted unescorted access. However, the service provider licensee's program must meet the requirements of Subpart B of 10 CFR Part 37. The licensee will still need to determine that the individual should be granted unescorted access and needs to document its basis (e.g., based on written verification from the service provider that a background investigation was conducted for the individual and the service provider approved the individual for unescorted access to Category 1 or Category 2 quantities of radioactive material). The licensee is not required to accept the service provider's certification and can choose to escort the individual(s).

For applicability of Subpart B to non-M&D service provider licensees, refer to NRC RIS 2017-02 (ADAMS Accession No. ML17023A159).

Q5: May I use information obtained as part of a criminal history records check for other purposes?

A5: No. The licensee may use the information obtained under this part only to determine suitability for either access to SGI, SGI-M, or unescorted access to a Category 1 or Category 2 quantity of radioactive material.

§ 37.27, "Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material" (continued)

§ 37.27(b), "Prohibitions"

§ 37.27(b)(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:

§ 37.27(b)(1)(i)

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

§ 37.27(b)(1)(ii)

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

§ 37.27(b)(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.

EXPLANATION:

These provisions prohibit the use of certain background investigation information.

Q&As:

Q1: Why can't I deny an individual unescorted access authorization based solely on FBI information about an arrest that resulted in a dismissal or acquittal, or an arrest more than 1 year old for which there is no information on the disposition of the case?

A1: This misuse of such information would be a violation of NRC regulations and Federal law. Section 149(c)(2)(C) of the AEA requires that Commission regulations for the use of FBI criminal history records check information ensure the following:

> …no final determination may be made solely on the basis of information provided under this section involving…an arrest more than 1 year old for which there is no information of the disposition of the case; or…an arrest that resulted in dismissal of the charge or an acquittal.

Taking such action on an incomplete record might unfairly penalize the individual. The charges may possibly have been dropped, or the individual may have been found not guilty, and the record was never updated to reflect the additional information.

§ 37.27, "Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material" (continued)

§ 37.27(c), "Procedures for Processing of Fingerprint Checks"

§ 37.27(c)(1)

For the purpose of complying with this subpart, licensees shall use an appropriate method listed in § 37.7 to submit to the U.S. Nuclear Regulatory Commission, Director, Division of Facilities and Security, 11545 Rockville Pike, ATTN: Criminal History Program/Mail Stop T 7D04M, Rockville, MD 20852, 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 emailing MAILSVC.Resource@nrc.gov. Guidance on submitting electronic fingerprints can be found at https://www.nrc.gov/security/chp.html.

§ 37.27(c)(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 Division of Facilities and Security by emailing Paygo.resource@nrc.gov). Combined payment for multiple applications is acceptable. The Commission publishes the amount of the fingerprint check application fee on the NRC's public Web site. (To find the current fee amount, go to the Criminal History and Firearms Checks under the Nuclear Security page at https://www.nrc.gov/security/chp.html).

§ 37.27(c)(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.

EXPLANATION:

These provisions establish procedures for processing fingerprint checks.

Q&As:

Q1: What do I need to submit with my fingerprints and where do I submit the fingerprints for processing?

A1: The RO certification (or a copy of the initial certification) should be provided with each fingerprint submission to indicate to whom the licensee specifies the results should be returned. If the designated RO changes, a new certification must be prepared by the licensee that includes the name of the new RO and provided to the NRC when subsequent sets of fingerprints are submitted.

Under the AEA, the licensee is 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 will not need to submit the individual's fingerprints to the NRC. A completed fingerprint card (Form FD-258) should be sent to:

U.S. Nuclear Regulatory Commission
Criminal History Program
Division of Facilities and Security
11545 Rockville Pike
Mail Stop T-7D04M
Rockville, MD 20852

Q2: How can I obtain fingerprint cards?

A2: The licensee can request more fingerprint cards (Form FD-258) by writing to the Office of Administrative Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555; or by sending an e-mail to MAILSVC.Resource@nrc.gov.

Q3: What information do I need to include on the fingerprint card?

A3: Licensees need to include the following information on each fingerprint card:

- last name, first name, and middle name
- signature of person being fingerprinted
- residence of person being fingerprinted (e.g., nearest town, State or territory, and zip code)
- date
- signature of the official taking the fingerprints
- address of the employer taking fingerprints
- reason for being fingerprinted (e.g., 10 CFR Part 37 regulatory requirement)
- aliases
- citizenship
- social security number and any of the other corresponding numbers requested on the card, if applicable (if the individual does not have a social security number, leave this box blank)
- date of birth
- place of birth
- sex

- race (e.g., A—Asian or Pacific Islander, B—Black, H—Hispanic/Latino, I—American Indian or Alaskan Native, or W—White)
- height
- weight
- eye color (BLK—Black, BLU—Blue, BRO—Brown, GRY—Gray, GRN—Green, HAZ—Hazel, MAR—Maroon, MUL—Multicolored, or PNK—Pink)
- hair color (BAL—Bald, BLK—Black, BLN—Blond, BLU—Blue, BRO—Brown, GRY—Gray or Partially, GRN—Green, ONG—Orange, PNK—Pink, PLE—Purple, RED—Red or Auburn, SDY—Sandy, XXX—Unknown, or WHI—White)

NRC licensees and applicants should use their NRC docket number in the field "YOUR No. OCA." Agreement State licensees should use their two-letter State abbreviation followed by a dash and the licensee's license number. For new license applications, an Agreement State may not be able to provide a license number before license issuance. In this situation, the Agreement State should create a unique identification number for the applicant to complete the fingerprinting card (e.g., CA-123456). The number must be unique for each applicant and must not be repeated once it is used. Incomplete fingerprint cards will not be processed and will be returned to the licensee.

Q4: May I use fingerprint cards I obtain from my LLEA?

A4: No. Licensees cannot use cards from other sources

Q5: Who may fingerprint my employees?

A5: The licensee should have its employees' fingerprints taken by an authorized official, such as a representative from an LLEA. An official authorized for this purpose could also be available through private entities, contractors, or an established onsite fingerprinting program. However, note that under 10 CFR 37.23(b)(2), the fingerprints of the nominated RO must be taken by a law enforcement agency, a Federal or State agency that provides fingerprinting services to the public, or a commercial fingerprinting service that has been authorized by a State to take fingerprints.

With the exception of the RO, there is no restriction on who may take the fingerprints. However, if the licensee has fingerprints taken at a facility other than that of a recognized Federal, State, or local law enforcement agency, it should ensure that the prints are taken legibly and that they match the identity of the individual named on the fingerprint card. In these cases, the individual who takes the fingerprints should, at a minimum, do the following:

- Attend training on how to take fingerprints. (The FBI offers training to take fingerprints, or such training may be available from LLEAs and some professional associations.)
- Verify the identity of the individual being fingerprinted by checking a Government-issued picture identification (e.g., a passport or driver's license), and verify that the name on the card matches the Government-issued identification.

- Sign the block on the fingerprint card labeled "SIGNATURE OF OFFICIAL TAKING THE FINGERPRINTS."

Q6: Is there a fee associated with the NRC's processing of the fingerprints?

A6: Yes. Because the fee changes occasionally, the licensee should check before submitting its fee payment. The NRC publishes the amount of the fingerprint check application fee on its public Web site. To find the current fee amount, go to the Electronic Submittals page at https://www.nrc.gov/site-help/e-submittals.html and select the link for the Criminal History Program. The entity taking the fingerprints may charge additional fees.

Q7: May the NRC waive the fee for processing the fingerprints?

A7: No. By law, the NRC may not waive or reduce the fee for processing the fingerprints. Subparagraph a.(3) of Section 149 of the AEA explicitly requires the costs of an identification or records check to be paid by the individual or entity required to conduct the fingerprinting.

Q8: What method of payment does the NRC accept?

A8: The NRC's preferred method of payment is electronic payment through Pay.gov at https://www.pay.gov. The licensee can make payments through Pay.gov directly from its credit or debit card. Licensees will need to establish a password and user identification number before they can access Pay.gov. To establish an account, the licensee must send its request to paygo@nrc.gov. The request must include the licensee's name, address, point of contact, e-mail address, and phone number. The NRC will forward each request to Pay.gov, and Pay.gov will contact the licensee with all of the necessary account information.

Licensees that use Pay.gov must make payments for processing before submitting applications for fingerprint checks to the NRC. Combined payment for multiple applications is acceptable. Licensees must include the Pay.gov payment receipt(s) along with the application(s).

For additional guidance on making electronic payments, contact the Security Management and Operations Branch, Division of Facilities and Security, at CrimHist.Resource@nrc.gov. The NRC also accepts checks, cashier checks, or money orders made out to the "U.S. Nuclear Regulatory Commission" along with the submission of fingerprint cards. Fingerprint cards with a Pay.gov receipt, check, cashier check, or money order should be sent to the following:

U.S. Nuclear Regulatory Commission
Criminal History Program
Division of Facilities and Security
11545 Rockville Pike
Mail Stop T-7D04M
Rockville, MD 20852

Q9: When making a payment to the NRC through Pay.gov for the processing of fingerprints, Pay.gov requires a TCN. What is a TCN, and what information should go in this field?

A9: TCN stands for "transaction control number." It is a tool that licensees can use to track their submissions, and it may include as much identifying information as would be useful for that purpose. For instance, licensees may include the names of one or more individuals for whom

payment is being made, the licensee's name, and the date of submittal. Because that field is on the Pay.gov form, the licensee may use the field for individuals' names or any other identifying information.

Q10: May I submit my fingerprint cards electronically to the NRC?

A10: Yes. Some licensees may choose to submit fingerprints electronically to the NRC. For many licensees, however, the cost of electronic fingerprinting equipment may be prohibitive. To establish an electronic fingerprinting program with the NRC, please contact the NRC's Security Management and Operations Branch in the Division of Facilities and Security at CrimHist.Resource@nrc.gov. Please note that under 10 CFR 37.7, "Communications," electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate the sender, and forward the submission to the U.S. Attorney General for FBI processing. The FBI will need to certify any fingerprint equipment that will be used for the purposes of complying with the fingerprinting requirements for quality and performance standards. The NRC and FBI systems can receive electronic fingerprint transmission specification fingerprints, either Type 4 (rolled prints) or Type 14 (flat prints). A sample listing of FBI-certified fingerprint equipment is available at https://www.fbibiospecs.cjis.gov/certifications. Copies of RO certifications should accompany electronic fingerprint submittals as well and can be submitted by fax to 301-415-5278.

Q11: What happens to the fingerprint cards after the NRC receives them from the licensee?

A11: The NRC scans the fingerprint cards to transmit to the FBI electronically. The agency retains and secures the cards for approximately 1 month and then the hard-copy fingerprint information is destroyed in accordance with Federal guidelines. The NRC system keeps a record of all the submissions, but it can produce a copy of that record only for a year; after a year, the NRC cannot print a copy.

Q12: Why might a fingerprint card be unclassifiable?

A12: Fingerprints may be unclassifiable for a number of reasons, including the following:

- Incomplete impressions were taken (e.g., the fingers were not completely rolled from one side of the nail to the other).
- The left and right hands were reversed on the fingerprint card.
- The same hand or finger was printed twice on the card.
- The fingerprints are not clear and distinct (e.g., they are smudged, uneven, or too dark or light).
- The fingers on the card are missing or are partially missing without an explanation.

To avoid rejection of fingerprints by the FBI as "unclassifiable," the individual who takes the prints should ensure that they are of good quality and that they do not include any of these deficiencies and should also follow the instructions on the back of the fingerprint card. Fingerprint cards with incomplete or missing information will be returned to the licensee to provide complete information, thus resulting in a delay in processing.

The FBI has provided guidance on its Web site about taking fingerprints for submission to the agency. This guidance also discusses special situations, such as fingerprinting an individual with abnormalities of the fingers, thumbs, or hands, and the appropriate way to identify such situations on the fingerprint card. The guidance also includes a checklist to verify that the fingerprint impressions meet the FBI's requirements.

Q13: What are the next steps in the process if the FBI rejects a Form FD-258 (fingerprint card) because the fingerprints are not classifiable? What options are available to licensees if, after multiple attempts, an individual's fingerprints cannot be classified based on conditions other than poor quality?

A13: If the FBI returns the initial fingerprint submission because the fingerprint impressions cannot be classified, the fingerprints may be retaken and resubmitted (i.e., a new Form FD-258 via electronic submission) for a second attempt. The licensee will not be charged for the resubmission if the licensee provides a copy of the FBI TCN or the FBI response indicating that the fingerprints could not be classified. If the FBI is unable to classify the second submission of fingerprints, the licensee may submit additional fingerprint impressions for the individual.

The third fingerprint card submission will require payment of an additional processing fee. If the third submission is also returned as unclassifiable, the licensee may submit a fourth set of fingerprints. An additional fee is not required because the fee for the third submission includes one resubmission. As with the second submission, the FBI response or TCN should be included, or the submission may be treated as a new request and an additional fee may be charged. Please note that a licensee may opt to take and submit the third and fourth sets of fingerprints together to avoid a potential delay in the response. If the third set is returned as unclassifiable, the NRC will automatically resubmit the fourth set.

No further submissions will be required, and the licensee may consider the results of the name search-FBI identification and criminal history records check as a component in determining trustworthiness and reliability.

The NRC will consider licensee requests for deviation from the above process for good cause (e.g., a demonstrated history of difficulty providing classifiable fingerprints during other fingerprinting programs or a documented medical condition or physical anomaly that can prevent the taking of readable prints). Licensees may submit a request for consideration of alternatives and the basis of the need for an alternative process to the NRC's Security Management and Operations Branch in the Division of Facilities and Security. Requests may be made by e-mail to CrimHist.Resurce@nrc.gov or mailed to the following address:

U.S. Nuclear Regulatory Commission
Criminal History Program
Division of Facilities and Security
11545 Rockville Pike
Mail Stop T-7D04M
Rockville, MD 20852

Please note that requests for an alternative to the above process will not affect a licensee's responsibility to fingerprint individuals for unescorted access or to comply with the T&R requirements.

§ 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"

§ 37.29(a)

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:

§ 37.29(a)(1)

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;

§ 37.29(a)(2)

A Member of Congress;

§ 37.29(a)(3)

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

§ 37.29(a)(4)

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

§ 37.29(a)(5)

Federal, State, or local law enforcement personnel;

§ 37.29(a)(6)

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

§ 37.29(a)(7)

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

§ 37.29(a)(8)

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;

§ 37.29(a)(9)

Emergency response personnel who are responding to an emergency;

§ 37.29(a)(10)

Commercial vehicle drivers for road shipments of category 1 and category 2 quantities of radioactive material;

§ 37.29(a)(11)

Package handlers at transportation facilities such as freight terminals and railroad yards;

§ 37.29(a)(12)

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 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material; and

§ 37.29(a)(13)

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 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

EXPLANATION:

This section identifies the categories of individuals who may be relieved from the background investigation elements. In addition, it establishes the conditions under which a licensee may accept a Federal agency security clearance or the T&R determination of a service provider licensee.

Q&As:

Q1: What is the basis for relieving individuals from fingerprinting and criminal history records check requirements?

A1: Under Section 149.b of Chapter 12 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.”

Q2: How may I determine if an individual has undergone a previous background investigation and falls under one of the categories listed in 10 CFR 37.29(a)?

A2: Some categories of individuals identified in 10 CFR 37.29(a)(1) should have government-issued photo identification. For example, a police officer, an NRC employee, or a State employee will have identification of some sort that identifies the individual and his or her employer so that no further checking will be necessary. For those individuals with no identification, either the individual or the individual's employer will need to provide documentation.

Q3: What type of documentation is necessary?

A3: The regulation in 10 CFR 37.29(a)(12) requires documentation to consist of written confirmation from the agency or employer that granted a Federal security clearance or reviewed the criminal history records check. Documentation may be a confirmation letter that the named individual has a security clearance that meets the requirements of Subpart B and that was issued on a specified date. Documentation may also consist of a copy of the background investigation determination itself if the agency or employer provides it. To show that the service provider's employee has undergone a background check under 10 CFR 37.29(a)(13), which is equivalent to that required under 10 CFR 37.25, the service provider licensee must send the service recipient licensee a written communication that includes the name and identifying information of the employee who will be providing the service and an affirmation that this employee has been determined to be trustworthy and reliable in accordance with 10 CFR 37.25(a)(1)–(7). To comply with these requirements, the service provider's background investigation must include fingerprinting and an FBI identification and criminal history records check; verifications of the individual's true identity, employment history, and education; and a character and reputation determination.

Q4: How long must I keep documentation records?

A4: The regulation in 10 CFR 37.23(h)(1) requires the licensee to keep the records for at least 3 years after the individual no longer requires unescorted access to Category 1 or Category 2 quantities of radioactive material or, under 10 CFR 37.103 until its license is terminated, whichever comes first.

Q5: May emergency first responders, such as police and fire department personnel, be deemed trustworthy and reliable without a background check?

A5: Yes. The NRC, State radiation protection agencies, and local law enforcement officials are relieved from the background investigation elements for purposes of responding to an emergency. In an emergency, such as a fire or explosion, emergency responders may be granted unescorted access for the purposes of controlling the emergency situation. Firefighters are not provided relief from the background investigation for routine inspections that the fire department may conduct.

State and local law enforcement officers that may be hired by a licensee for as-needed or contract work may be exempt from the requirements for a full background check if documentation is obtained from the law enforcement agency consisting of written confirmation from the agency or employer that granted a security clearance or reviewed the criminal history records check. Documentation may be a confirmation letter that the named individual has a security clearance that meets the requirements of Subpart B, including fingerprinting and an FBI

criminal history records check, and that it was issued on a specified date. Documentation may also consist of a copy of the background investigation determination itself if the agency or employer provides it.

Q6: May properly qualified security equipment vendors or service providers be considered trustworthy and reliable and granted unescorted access to the radioactive material or devices containing the radioactive material?

A6: Yes. However, the vendor or service provider must meet the requirements in 10 CFR Part 37. Employees of the vendor or service provider licensees do not need to go through the customer's process for determining their T&R for unescorted access at a customer's facility; instead, if the vendor or service provider licensee has made its own determination of T&R for its personnel, this licensee may provide its customers a certification of each employee's T&R for being granted unescorted access. However, the vendor or service provider's program must meet the requirements in Subpart B of 10 CFR Part 37.

Q7: What does the NRC mean by "commercial driver" in 10 CFR 37.29(a)(10)?

A7: A commercial driver is someone who drives commercial vehicles for a living. For example, someone driving for Federal Express (FedEx), United Parcel Service (UPS), or Dalsey, Hillblom, Lynn (DHL) is considered a commercial driver. The NRC will rely on DOT and TSA programs for background investigations of these personnel. The NRC will not consider an individual who works for the licensee and, for example, drives a company truck between radiography jobs to be a commercial driver, therefore he or she will need to undergo a background investigation before having unescorted access to a Category 1 or Category 2 quantity of radioactive material.

Q8: Why are commercial drivers and package handlers relieved from undergoing background checks under 10 CFR Part 37?

A8: These individuals are typically outside the control of the licensee, and it would have no way of knowing or influencing who those individuals might be. The NRC will rely on DOT and TSA programs for background investigations of these individuals. Although the background investigation may not be identical to those required under 10 CFR Part 37, the NRC believes that the potential risk that a commercial driver or package handler might pose because of any difference in the background investigation is acceptably small.

Q9: If an individual falls under one of the categories listed for relief in 10 CFR 37.29, am I required to grant the individual unescorted access to the material?

A9: No. The regulation in 10 CFR Part 37 does not require the licensee to grant unescorted access to any radioactive materials or other property subject to NRC regulations to any individual. The licensee still needs to decide whether to grant or deny an individual unescorted access independent of whether he or she qualifies for relief from fingerprinting and other background investigation elements under one of the categories in 10 CFR 37.29. This section simply clarifies that a licensee may permit unescorted access to certain categories of individuals without performing a background investigation if these officials are otherwise qualified for access and have a demonstrated need for it. However, the licensee will need to conduct any training necessary under 10 CFR 37.43(c) before granting such individuals unescorted access.

Q10: Would State radiation control program directors or their designated State employee representatives be exempt from background checks under 10 CFR Part 37 even if their need for unescorted access is not security related, such as in a safety inspection?

A10: Yes. The regulation in 10 CFR 37.29(a)(6) relieves these officials from the background investigation elements.

Q11: Am I required to allow an NRC or Agreement State inspector unescorted access?

A11: No. The regulations in 10 CFR 37.105, "Inspections," which provide inspectors access to a licensee's facilities and records, do not require the licensee to provide unescorted access. The licensee may always escort an inspector when he or she is in a security zone or is inspecting protected information.

Q12: Under what circumstances are non-M&D service providers relieved from elements of the background investigation?

A12: The NRC has determined that 10 CFR Part 37, Subpart B, can apply to non-M&D service provider licensees. Although 10 CFR Part 37 does not require a non-M&D service provider licensee to establish an access authorization program, a non-M&D service provider licensee must establish an access authorization program compliant with 10 CFR Part 37, Subpart B, if it intends to take advantage of the 10 CFR 37.29(a)(13) provision that permits their employees to be granted unescorted access by the client licensee.

Please see NRC RIS 2017-02 (ADAMS Accession No. ML17023A159) for additional information.

§ 37.29, "Relief from Fingerprinting, Identification, and Criminal History Records and other elements of background investigations Checks for Designated Categories of Individuals Permitted Unescorted Access to Certain Radioactive Materials" (continued)

§ 37.29(b)

Fingerprinting, and the identification and criminal history records checks required by section 149 of the Atomic Energy Act of 1954, as amended, are not required for 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 provided that he or she makes available the appropriate documentation. Written confirmation from the agency/employer that reviewed the criminal history records check must be provided to the licensee. The licensee shall retain this documentation for a period of 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material. These programs include, but are not limited to:

§ 37.29(b)(1)

National Agency Check;

§ 37.29(b)(2)

Transportation Worker Identification Credential (TWIC) under 49 CFR part 1572;

§ 37.29(b)(3)

Bureau of Alcohol, Tobacco, Firearms, and Explosives background check and clearances under 27 CFR part 555;

§ 37.29(b)(4)

Health and Human Services security risk assessments for possession and use of select agents and toxins under 42 CFR part 73;

§ 37.29(b)(5)

Hazardous Material security threat assessment for hazardous material endorsement to commercial drivers license under 49 CFR part 1572; and

§ 37.29(b)(6)

Customs and Border Protection's Free and Secure Trade (FAST) Program.

EXPLANATION:

Individuals with a favorably adjudicated U.S. Government criminal history records check under a comparable Federal program within the last 5 years may be relieved from the 10 CFR Part 37 fingerprinting and FBI criminal history records check. However, the licensee must conduct the other elements of the required background investigation.

Q&As:

Q1: What does it mean for an individual to have a "favorably adjudicated" U.S. Government criminal history records check?

A1: The licensee may consider an individual's criminal history records check to have been "favorably adjudicated" if the individual is authorized under the applicable program to conduct the activity for which the check was made. The regulation in 10 CFR 37.29(b) states that the adjudication must have been conducted within the last 5 years under a Government program involving fingerprinting and an FBI identification and criminal history records check, comparable to those programs listed.

Q2: What does the NRC consider a "comparable" U.S. Government program?

A2: A comparable U.S. Government program is one that requires an individual to submit fingerprints for an FBI criminal history records check. In most cases, the Government agency would issue an approval that could include an identification card or a specific approval to work in certain areas. If you need to contact the approving Government agency, you can identify the agency points of contact by conducting a search of comparable U.S. Government program Web sites for the following:

- National Agency Check (agency that submitted the National Agency Check)
- Transportation Worker Identification Credential (https://www.tsa.gov/)
- Bureau of Alcohol, Tobacco, Firearms and Explosives background check and clearances under 27 CFR Part 555, "Commerce in Explosives" (https://www.atf.gov)
- U.S. Department of Health and Human Services security risk assessments for possession and use of select agents and toxins under 42 CFR Part 73, "Select Agents and Toxins" (https://www.hhs.gov)
- Hazardous material security threat assessment of a hazardous material endorsement to a commercial driver's license under 49 CFR Part 1572, "Credentialing and Security Threat Assessments" (https://www.tsa.gov, https://www.dhs.gov)
- U.S. Customs and Border Protection's Free and Secure Trade Program (FAST), Global Entry, NEXUS, Secure Electronic Network for Travelers Rapid Inspetion (SENTRI), and TSA Precheck Programs. (https://www.cbp.gov)

Q3: What documentation must I have to accept the individual's claim that he or she has been favorably adjudicated?

A3: The regulation in 10 CFR 37.29(b) requires the individual to make available documentation that his or her adjudication is currently valid, and the licensee must receive written confirmation from the agency or employer that reviewed the criminal history records check.

The licensee can contact the agency or employer responsible for the comparable U.S. Government program, but the agency or employer may be reluctant to release the information to a third party for privacy reasons. In this case, the individual seeking relief would have to authorize release of information or request the information directly from the agency or employer. The NRC does not plan to list contact information because this may change frequently. The NRC has found the following information to be useful in meeting 10 CFR 37.29(b):

- Regarding the National Agency Check, the Office of Personnel Management Web site instructs individuals to contact their agency's personnel security office regarding the status of their security clearance. To contact a person about a national agency check, just call the employer listed. The contact number should be on the individual's application for employment. Otherwise, the Office of Personnel Management's Web site has information on background investigations at https://nbib.opm.gov.

- For individuals favorably adjudicated under the TSA's Transportation Worker Identification Credential (TWIC) program, individuals will likely have documentation from the TSA. If not, contact information is available on the TSA Web site. These individuals are issued a TWIC card. Contact TWIC at https://www.tsa.gov/for-industry/twic or call the number provided on the Web site.

- For the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) and the Centers for Disease Control and Prevention (CDC), the individual would not necessarily have to contact the ATF or CDC directly. These two agencies have a licensing and/or permitting program similar to the NRC's. The "licensee" or "entity" overseeing the security assessments should have the necessary documentation from these Federal agencies. Contact the ATF at https://www.atf.gov/. A list of offices and contact information can be found at https://www.atf.gov/contact/contact-atf-headquarters. Contact the CDC at https://www.cdc.gov/. A list of offices and contact information can be found at https://www.cdc.gov/contact/.

- To contact the U.S. Department of Health and Human Services regarding security risk assessments for possession and use of select agents and toxins, visit the Web site at https://www.selectagents.gov.

- Individuals favorably adjudicated under the TSA's Hazardous Materials Endorsement programs will likely have documentation from the TSA. If they do not, contact information is available on the TSA Web site. These individuals are issued a commercial driver's license that reflects the hazmat endorsement. Information about TWIC can be found at https://www.tsa.gov/for-industry/twic. For questions about the hazardous endorsement listed on the commercial driver's license, contact the State that issued the driver's license.

- The U.S. Customs and Border Protection also issues a card for the FAST and SENTRI programs, and contact information is available on its Web site, similar to that for the TSA. For more information about the FAST program, visit https://www.cbp.gov/travel/trusted-traveler-programs/fast.

NOTE: The contact information provided above was validated but may change based on the particular agency's requirements.

Q4: May I grant unescorted access to Category 2 or greater quantities of radioactive materials to an individual relieved from fingerprinting and criminal history investigation without any other checks?

A4: No. The licensee must still fulfill the requirements in 10 CFR 37.25(a)(2)–(6) for other elements of the background investigation. These elements include a verification of true identity; a verification of employment and education; a character and reputation determination; and an acquisition and, to the extent possible, an evaluation of information obtained from sources independent of those provided by the individual. After completing these checks, the licensee may then grant unescorted access if the individual's job duties require it.

Q5: When an individual has been favorably adjudicated under a "comparable U.S. Government program" under 10 CFR 37.29(b), does this mean comparable to one of the programs listed under 10 CFR 37.29(b)(1)–(6) above, or comparable to the background investigation requirements of 10 CFR Part 37?

A5: To be "comparable" for the purposes of 10 CFR 37.29(b), the program must include fingerprinting and an FBI criminal history records check.

Q6: Do I need to obtain a signed consent from an individual who has undergone a fingerprinting and a criminal history records check under a comparable Federal program?

A6: Yes. The licensee will need signed consent from an employee who has undergone fingerprinting and a criminal history records check under a comparable Federal program because it will still need to conduct the other elements of the background investigation required by 10 CFR 37.25. These other elements include verification of the individual's true identity, employment, and education history and an evaluation of his or her character and reputation.

Q7: Must I do a reinvestigation of an individual who qualified for relief from the fingerprinting and criminal history records check portion of the background investigation such as an individual approved under another Federal security review program under 10 CFR 37.29(b)?

A7: The relief provided by 10 CFR 37.29(b) does apply to the reinvestigation, but the licensee will need to check and document that the individual still meets the relief category. If the affected individual has an approval that is still valid under another Federal security review program, the licensee does not need to conduct a reinvestigation.

§ 37.31, "Protection of Information"

§ 37.31(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.

EXPLANATION:

Licensees must establish and maintain a filing system and written procedures to protect from unauthorized disclosure records and personal information produced from background investigations under 10 CFR Part 37.

Q&As:

Q1: Are licensees required to protect information obtained during a background investigation?

A1: Yes. The collected information will likely contain personally identifiable information (PII) and should be provided only to authorized individuals. Under Section 149(c)(2)(D) of the AEA, as amended, the Commission is required to prescribe requirements for the use of background investigation information "to protect individuals subject to fingerprinting under this section from misuse of the criminal history records." Accordingly, under 10 CFR 37.31(a), the licensee is required to establish and maintain a system of files and procedures to protect the information from disclosure to any unauthorized person. As good practice, the licensee should store background investigation documentation in a locked drawer or file cabinet.

Q2: What does the NRC consider to be "unauthorized disclosure"?

A2: The NRC considers "disclosure" to be the provision, either deliberately or inadvertently, of any information obtained in a background investigation in accordance with this subpart by any means, including electronic means, such as facsimile, voice mail, or e-mail. Such disclosure is "unauthorized" if the recipient of the information is not the subject individual, the individual's representative, an authorized representative of the NRC or an Agreement State agency, or an RO. (See 10 CFR 37.31(b).)

Q3: If I need to prepare an information protection program for my employees' background investigation information, and I want someone other than the RO or other physical security staff (e.g., an information technology specialist) to prepare the program, do I have to conduct a full background investigation on that individual, even if he or she does not require access to radioactive material to perform a job duty?

A3: No. An individual who prepares an information protection program for the access authorization program is not required to undergo a background investigation.

Q4: Should my procedures for information protection address the destruction of records?

A4: This section does not explicitly require that a licensee's information protection procedures address the destruction of records, but this procedure would be a good practice, especially for PII. PII is information that can be used, by itself or in combination with other information, to distinguish or trace an individual's identity. It includes personal information, such as an individual's social security number; date and place of birth; mother's maiden name; biometric records; and records of his or her education, financial transactions, and employment or medical history. To prevent an unauthorized individual from gaining access to records containing PII, the licensee should destroy them by shredding, burning, pulping, degaussing, or using a similarly irreversible method. For more information and guidance on protecting PII, an OMB memorandum to Federal agencies entitled, "Safeguarding Against and Responding to the Breach of Personally Identifiable Information," dated May 22, 2007, may be useful. The licensee should also check for applicable State or local government requirements for PII protection and destruction.

§ 37.31, "Protection of Information" (continued)

§ 37.31(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, safeguards information, or safeguards information-modified handling. 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.

EXPLANATION:

This provision restricts the disclosure or the redissemination of personal information collected under 10 CFR Part 37 background investigations.

Q&As:

Q1: Under what circumstances may I disclose the personal information obtained during a background investigation?

A1: The licensee may disclose the information to the subject individual, his or her representative, a duly authorized representative of the NRC or an Agreement State agency, or an individual with a need for access to the information to perform an assigned duty that supports a decision on unescorted access to a quantity of radioactive material subject to 10 CFR Part 37 or information protected under 10 CFR 37.43(d). If the licensee has a question about whether an individual has a need to know the information, it should verify the need before providing the information. A supervisor should be contacted to ensure that the request is legitimate.

As good practice, the licensee should ask the requestor to put the request in writing and to specify the nature of the information requested and should document the requestor's need to know. State, local, or Federal law may also require disclosure for such purposes as criminal investigations.

Q2: How do I determine that another person requesting access to these records or personal information has a need to know?

A2: If it is not the individual or an NRC or Agreement State inspector, the licensee should inquire why the individual needs the information. The licensee may contact the individual's supervisor to verify the need for the information. If the individual is from another company, the licensee must find out why he or she is requesting the information. In addition, the licensee must ensure that the request is legitimate and must determine if it will comply with the request. The licensee is not required to share information with other licensees.

Q3: Do I need to document a need to know?

A3: The regulations in 10 CFR Part 37 contain no specific requirements to document a need to know. The licensee, however, should consider this a prudent practice to enable it to show compliance with the requirement not to disseminate the information to any individual who does not have a need to know.

§ 37.31, "Protection of Information" (continued)

37.31(c)

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

37.31(c)(1)

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

37.31(c)(2)

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

EXPLANATION:

These provisions establish conditions under which a licensee may provide personal information that it obtained on an individual from a background investigation to another licensee.

Q&As:

Q1: May one licensee transfer personal information it obtained during an investigation to another licensee?

A1: Yes, the licensee may do so if the subject individual makes a written request to the licensee to transfer the information contained in his or her file.

Q2: If I receive background investigation information from another licensee, may I rely on that information, or must I re-verify it?

A2: Unless the information is older than the 10-year reinvestigation period, the licensee may rely on the information without re-verification. However, the regulation in 10 CFR 37.23(e)(3) requires the licensee to document the basis for concluding that each individual with unescorted access to Category 2 or greater quantities of radioactive material is trustworthy and reliable.

The receiving licensee must verify information, such as the name, date of birth, social security number, gender, and other physical characteristics of the subject individual, to ensure that he or she is the person whose file has been transferred. The receiving licensee must ensure that the information transferred is for the correct individual. The receiving licensee may ask the originating licensee to provide information about distinguishing characteristics so that it can verify the individual. Such characteristics could include estimated height; birthmarks; scars; tattoos; missing or partially missing fingers or fingernails; and, if permissible under applicable laws and regulations, race and ethnicity.

Q3: Must I redisseminate an employee's background investigation information if he or she requests it?

A3: No. The regulations in 10 CFR Part 37 contain no such requirement. Sharing with another licensee the information that a licensee developed is entirely discretionary.

Q4: Can T&R determinations and background checks be transferred during a transfer of control of a license to a new company? Would the individuals have to give consent? Would the RO have to be recertified in writing?

A4: T&R determinations and background checks related to compliance with 10 CFR Part 37 may possibly be transferred during a transfer of control of a license to a new company. Because transfers of control can take many forms (e.g., parent company change with no change in radioactive material workers versus a complete change of personnel, duties, and assignments), it is important to review Chapter 5 in NUREG-1556, Volume 15, Revision 1, "Guidance about Changes of Control and About Bankruptcy Involving Byproduct, Source, or Special Nuclear Materials Licenses," issued June 2016. Licensees are required to notify the regulator before the change of controls. New owners will be vetted through the prelicensing process. For this licensing action, the licensee will need to document any changes in personnel who have responsibility for radiation safety or are authorized to use licensed material (e.g., the RO as described in 10 CFR 37.23(b)(2)). License reviewers follow this guidance and also consider the information in RIS 2014-08, Revision 1, "Regulatory Requirements for Transfer of Control (Change of Ownership) of Specific Materials Licenses," dated May 5, 2016.

In 10 CFR 37.27(a)(4), the NRC states that an existing criminal history records check file may be transferred to the licensee asked to grant unescorted access in accordance with the provisions of 10 CFR 37.31(c). This will require the individual's consent in accordance with 10 CFR 37.31(c)(1). However, the new licensee is still required to review the information collected and make an independent T&R determination based on that information rather than relying solely on another licensee's determination. This also applies to ROs—the new company will have to review the information and make a determination on the T&R of the RO.

In addition, 10 CFR 37.23(b)(2) states that the licensee shall recertify that the RO is deemed trustworthy and reliable every 10 years in accordance with 10 CFR 37.25(c), which states that licensees shall conduct a reinvestigation every 10 years for any individual with unescorted access to Category 1 or Category 2 quantities of radioactive material. The reinvestigation shall consist of fingerprinting and an FBI identification and criminal history records check in accordance with 10 CFR 37.27. The reinvestigations must be completed within 10 years of the date on which these elements were last completed.

§ 37.31, "Protection of Information" (continued)

§ 37.31(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.

§ 37.31(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 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

EXPLANATION:

Licensees must make background investigation records available to the NRC for its examination to determine compliance. Licensees must also retain all fingerprint and criminal history information that they receive from the FBI on an individual for 3 years from the date that the individual no longer requires unescorted access.

Q&As:

Q1: Does the NRC have a right to review the background investigation records?

A1: Yes. To determine compliance with applicable laws and regulations, an inspector or other authorized representative of the NRC may examine the background investigation records, and 10 CFR 37.31(d) requires the licensee to make them available for examination.

Q2: What background investigation records do I need to maintain for NRC inspection under 10 CFR 37.31(d)?

A2: This subsection requires the licensee to make available for the NRC's examination "background investigation records obtained under this subpart." This requirement would include, among other things, all records that must be maintained under 10 CFR 37.23(e) concerning the licensee's basis for concluding if "reasonable assurance that an individual is trustworthy and reliable" exists. In addition, 10 CFR 37.23(h)(1) more generally requires the licensee to retain for 3 years "documentation regarding the T&R of individual employees." The NRC considers this documentation to include, in addition to the fingerprint and criminal history records covered under 10 CFR 37.27(e) above, all background investigation records that the licensee must obtain under 10 CFR 37.25(a)(2)–(a)(6). In addition, 10 CFR 37.29(b) requires the licensee to retain any written confirmations that it receives concerning a favorably adjudicated criminal history records check, 10 CFR 37.29(a)(12) requires the licensee to retain any written confirmations that it receives from U.S. Government entities concerning a Federal security clearance, and 10 CFR 37.29(a)(13) requires the licensee to retain any written verifications that it receives from service providers.

Q3: What fingerprint and criminal history records do I need to maintain?

A3: The regulation in 10 CFR 37.31(e) requires the licensee to retain all fingerprint and criminal history records (including data that indicate no record) that it received from the FBI or a copy of these records if the individual's file has been transferred.

Q4: How long do I need to keep background investigation and fingerprint and criminal history records on an individual?

A4: The regulation in 10 CFR 37.31(e) requires that if the licensee receives an individual's fingerprint and criminal history file from another party, it must retain a copy of these records for 3 years from the date that the individual no longer requires unescorted access to Category 1 or Category 2 quantities of radioactive material. The regulation in 10 CFR 37.23(h)(1) requires the licensee to retain records on its determination of an individual's T&R, including background investigation records, for 3 years from the date that the individual no longer requires unescorted access. However, if the licensee's license is terminated before either of these retention periods elapses, the licensee, under 10 CFR 37.103, needs to retain these records only until the termination of its license.

Q5: According to 10 CFR 37.23(h), I need to keep records for 3 years. Since these records will contain information that needs to be protected, how do I properly dispose of them?

A5: The background investigation records will likely contain personal information that will be considered PII. Records containing PII should be destroyed, not just tossed in the trash, to prevent an unauthorized individual from gaining access to that information.

§ 37.33, "Access Authorization Program Review"

§ 37.33(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 periodically (at least annually) review the access program content and implementation.

§ 37.33(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.

§ 37.33(c)

Review records must be maintained for 3 years.

EXPLANATION:

Licensees must review and assess the effectiveness of their access authorization programs, take appropriate corrective actions, and maintain the records for 3 years.

Q&As:

Q1: How should I evaluate the "effectiveness" of my access authorization program to comply with NRC requirements for program reviews?

A1: The licensee should consider several things when evaluating the continued effectiveness of its program. Specifically, the licensee should consider its ability to demonstrate compliance with all the applicable requirements in this subpart and to take comprehensive and effective actions to correct identified noncompliances. Most importantly, the licensee should keep in mind that continuing effectiveness is not a static condition. Continuing improvements are an essential part of an effective program.

To minimize the potential for overlooking an adverse condition, the licensee's program reviews should address each applicable requirement of this subpart. These reviews should identify adverse conditions, noncompliances, and root causes and should provide corrective actions. The licensee also should follow up on the implementation of these actions and reassess their effect on the program. The hallmark of an effective program is not the absence of recorded adverse conditions or noncompliances; it is documented evidence that the licensee has made a diligent effort to find these problems and that it is continuing to reassess the effectiveness of its

actions to prevent problems from reoccurring. Ultimately, the most important indicator of an effective program is that the licensee is consistently able to identify and successfully address existing and emerging deficiencies.

Q2: How do I ensure that I will meet the requirement to review the access authorization program "at least annually"?

A2: Recognizing that some demands on a licensee's time and resources are beyond its control, the NRC will consider that the licensee is conducting a program review "at least annually" if it conducts such a review each year at about the same time.

Q3: Must I engage an outside contractor to review the access authorization program? If not, how can I ensure that the review isn't conducted by the same people carrying out the activities being reviewed?

A3: Although hiring an independent party to review access authorization programs would be one way to demonstrate compliance, the regulation does not require it. Although self-assessments do have value and would meet the requirement, the licensee should try to avoid a situation in which individuals are reviewing their own work. To avoid self-reviews, if the licensee has a large enough staff, it could establish a review team of approved individuals. An individual, such as the security official or RSO, who works outside the management chain of the licensee's access authorization staff could lead this team. If the licensee has separate programs at more than one location with a different RO at each location, another way to run a more arm's-length review would be to have the review team at one location review the program implemented by the staff of a different facility. Licensees also may choose to set up a review team through an industry association using participants from several independent member organizations to review programs.

Q4: Do I need to report to the NRC any noncompliance identified during an access authorization program review?

A4: No. The licensee does not have to report any noncompliance to the NRC unless a specific regulation requires such a report to the agency. However, 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 and the cause of the condition(s) and, when appropriate, recommend corrective actions and describe 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.

Q5: What would the NRC consider a "condition adverse to the proper performance of the access authorization program"?

A5: The NRC will consider an adverse condition to be anything that, if not corrected, could impair the effectiveness of the licensee's access authorization program or its continuing compliance with the requirements of this subpart. An example of an adverse condition might be a delay in reinvestigation of employee. An example might be a licensee's failure to determine beforehand, under 10 CFR 37.31(b), the need to know of an unfamiliar individual who makes an initial request for the redissemination of personal information about an employee. An adequate program review should never be limited to looking only for existing or imminent noncompliances.

It should assess or reassess all conditions that may call into question the continuing effectiveness of the licensee's access authorization program.

Q6: The regulation in 10 CFR 37.33(b) requires the report resulting from a program review to recommend corrective actions "when appropriate." When should I recommend corrective actions?

A6: At a minimum, a program review report should recommend one or more corrective actions for each noncompliance or condition "adverse to the proper performance of the access authorization program" identified as a result of the review.

Q7: What should I consider as "review documentation" for the purposes of this subsection?

A7: The licensee should retain the annual review report itself and any attachments or enclosures related to that report. Related records should include the membership and leadership of the review team, if applicable; a description of the management approval process for the annual report, if applicable; root cause analyses for identified noncompliances or adverse conditions; recommended corrective actions; evaluations of the effectiveness of past corrective actions; and other documents that were considered in the review. A good review documentation practice is to include minority views on issues in the report when there is significant professional disagreement. The NRC does not expect the licensee to retain rough drafts of its annual access authorization program reviews, its meeting records, or the notes of each member of a review team.

Q8: How long should I maintain records of the program review?

A8: Records must be kept for 3 years under 10 CFR 37.33(c).

Q9: Do I need to keep a paper copy of the program review or may I keep an electronic copy?

A9: The licensee may keep either a paper copy or an electronic copy as long as the record is legible for the required period and can be accessed. To discourage unauthorized alteration, the licensee should make electronic copies read-only if possible (e.g., by saving them in a PDF).

ANNEX A

ADDITIONAL GUIDANCE FOR EVALUATING AN INDIVIDUAL'S TRUSTWORTHINESS AND RELIABILITY FOR ALLOWING UNESCORTED ACCESS TO CERTAIN RADIOACTIVE MATERIAL

Background

Each licensee is responsible for determining whether to grant an individual unescorted access to Category 1 and Category 2 radioactive materials. The licensee shall allow only individuals whom it has approved and documented as trustworthy and reliable to have unescorted access to a Category 2 or greater quantity of radioactive material and devices containing that quantity. The licensee's reviewing official (RO) makes the trustworthiness and reliability (T&R) determination based on the information collected during the background investigation. The RO must document the determination basis.

Note that the guidance also can be used when information is received after an individual has been approved for unescorted access.

Unescorted access determinations require an evaluation of a person's T&R. When a person's life history shows evidence of unreliability or untrustworthiness, a licensee may question if that person can be relied on and trusted to exercise the responsibility necessary for working with Category 1 and Category 2 quantities of radioactive materials. The purpose of the T&R determination requirement is to provide reasonable assurance that those individuals are trustworthy and reliable and do not constitute an unreasonable risk to the public health and safety, including the potential to commit radiological theft or sabotage. In evaluating the relevance of an individual's conduct, the RO should consider the following factors:

- the nature, extent, and seriousness of the conduct
- the circumstances surrounding the conduct, including evidence as to if it was deliberate
- the frequency and recency of the conduct
- the individual's age and maturity at the time of the conduct
- the extent to which participation in the conduct was voluntary
- the presence or absence of rehabilitation and other permanent behavioral changes
- the motivation for the conduct
- the potential for pressure, coercion, exploitation, or duress as a result of the conduct
- the likelihood of continuation or recurrence

Each case must be judged on its own merits, and the final determination remains the responsibility of the licensee. In every case, the RO must evaluate T&R based on an accumulation of information that supports a positive finding before granting unescorted access. Items to consider include the following:

- if the information collected is consistent and adequate
- if the applicant's true identity can be reasonably verified by comparing applicant-provided identification and personal history data to pertinent information from the background investigation and other data sources
- if inconsistencies identified by the licensee's review or investigation are intentional, innocent, or an oversight

Initial Trustworthiness and Reliability Determinations

The T&R determination process should consist of the following elements:

- informed consent
- personal history disclosure
- background investigation
- determination basis

Informed consent is the individual's authorization that allows the licensee to conduct the background investigation to determine if the individual is trustworthy and reliable. The licensee must explain to the individual that a background investigation is being conducted and then explain the potential consequences if the individual does not agree to the background investigation. The signed consent shows that the individual has received the appropriate explanation and indicates his or her understanding that a background investigation will be conducted. The signed consent must include authorization to share personal information with other individuals or organizations, as necessary, to complete the background investigation. Annex B, "Sample Consent Form for Background Investigations," provides a template for a possible consent form that a licensee can adapt for its use.

The personal history disclosure is the information that the individual who is seeking unescorted access to Category 1 or Category 2 quantities of radioactive material must provide. It is the type of information typically collected on an employment application. The information should include items such as employment history, education, references, and any arrest record. Other information discussed later in this annex may be included but is not required. This information

gives the RO a starting point for the background investigation. The following are examples of information collected from employment, military service, and education records and from references:

Employment	Military Service
• Name of employer • Address (including, city, State, and zip code) • Position held/Job title • Period of employment • Supervisor name/Telephone number/E-mail address • Reason for leaving (considered trustworthy and reliable during employment) • If self-employed, business reference and telephone number • If unemployed, names and telephone numbers of persons who can verify activities	• Service period • Type of service (e.g., active duty, reserves) • Country served • Branch of service • Name of supervisor/commander and telephone number • Last command/duty station/base/unit (including address) • Grade or rank at discharge • DD Form 214, "Certificate of Release or Discharge from Active Duty"
Education	**References**
• Institution • Address (including city, State, and zip code • Period of enrollment • Graduation date • Degree received • Major/Field of study	• Full name • Address (including city, State, and zip code) • Telephone number/E-mail address • Relationship (e.g., friend, neighbor, work associate, schoolmate)

A background investigation includes several components, including fingerprinting and a Federal Bureau of Investigation (FBI) identification and criminal history records check, verification of the individual's true identity, a review of information obtained about the individual's employment history and education, and a character and reputation determination.

The regulation in 10 CFR 37.23(e)(2) requires the RO to use all the information gathered during the background investigation to make a determination that an individual is trustworthy and reliable. The NRC expects licensees to use their best efforts to obtain this information. The licensee may use information previously obtained during the hiring process (e.g., information obtained from the employment application) to support the T&R determination without having to reverify that information.

Willful or intentional acts of omission or untruthfulness could be grounds for denial of unescorted access. When a licensee submits fingerprints to the NRC, it will receive an FBI identification and criminal history record since the individual's 18th birthday. The licensee's RO should evaluate that information using the guidance below, where appropriate. The licensee's RO is

required to evaluate all available information in making a T&R determination for unescorted access to radioactive materials, including the criminal history records information pertaining to the individual.

The FBI identification and criminal history records check is used to determine if the individual has a record of criminal activity that indicates the individual should not have unescorted access to Category 1 and Category 2 radioactive materials. . Identification of a criminal history through the FBI criminal history records check or a discretionary local criminal history check does not automatically indicate the unreliability or untrustworthiness of the employee. The licensee will have to judge the nature and recency of the criminal activity. The licensee may authorize individuals with criminal records for unescorted access to radioactive materials based on a documented evaluation of the basis for determining that the employee or applicant is reliable and trustworthy, notwithstanding his or her criminal history. The licensee's documentation of each T&R determination for unescorted access to radioactive materials, which must include a review of criminal history information, must include the basis for the decision made. Licensees should not make a final determination based solely on criminal history check information involving an arrest that is more than 1 year old for which no information is available on the disposition of the case or an arrest that resulted in dismissal or acquittal of the charge.

Licensees also may consider how recently such indicators occurred and other extenuating or mitigating factors in their determinations. Section 149.c.(2)(B) of the Atomic Energy Act of 1954, as amended, requires that the information obtained as a result of fingerprinting be used solely for the purposes of making a determination as to suitability for unescorted access. Such a determination is not a hiring decision, and the NRC does not intend for licensees to use this guidance for such purposes. A determination that a particular individual is unsuitable for unescorted access does not necessarily mean that he or she is unsuitable for escorted access or for some other position that does not involve NRC-regulated activities.

Licensees must consider all information collected in making a T&R determination for unescorted access. They must substantiate and document potentially disqualifying information obtained from confidential or unnamed sources and should not use this information as the sole basis for denying access authorization unless corroborated.

Licensees may establish criteria that would disqualify someone from being granted authorized access. In every case, the licensee should evaluate T&R based on an accumulation of information that supports a finding with reasonable assurance. The licensee is responsible for making the T&R determination for an employee who is seeking unescorted access. The T&R determination is designed to identify past actions pertinent to whether reasonable assurance of an individual's future reliability exists. If so desired, licensees may consider use of the following guidelines to establish disqualifying criteria:

Guideline A: Allegiance to the United States

Indicators that could raise a concern:

- involvement in, support of, training to commit, or advocacy of any act of sabotage, espionage, treason, terrorism, or sedition against the United States of America

- association or sympathy with persons who are attempting to commit, or who are committing, any of the above acts

- association or sympathy with persons or organizations that advocate, threaten, or use force or violence, or use any other illegal or unconstitutional means, in an effort to do the following:
  - overthrow or influence the Government or any State or local government
  - prevent Federal, State, or local government personnel from performing their official duties
  - gain retribution for perceived wrongs caused by the Federal, State, or local government
  - prevent others from exercising their rights under the Constitution or laws of the United States or of any State

Guideline B: Foreign Influence

Indicators that could raise a concern:

- contact with a foreign family member, business or professional associate, friend, or other person who is a citizen of or resident in a foreign country if that contact creates a heightened risk of foreign exploitation, inducement, manipulation, pressure, or coercion
- connections to a foreign person, group, government, or country that create a potential conflict of interest between the individual's obligation to protect sensitive information or technology and the individual's desire to help a foreign person, group, or country by providing that information

Guideline C: Foreign Preference

Indicators that could raise a concern:

- Exercise of any right, privilege, or obligation of foreign citizenship after becoming a U.S. citizen or through the foreign citizenship of a family member. This includes but is not limited to the following:
  - possession of a current foreign passport
  - military service or a willingness to bear arms for a foreign country
  - accepting educational, medical, retirement, social welfare, or other such benefits from a foreign country
  - residence in a foreign country to meet citizenship requirements
  - using foreign citizenship to protect financial or business interests in another country
  - seeking or holding political office in a foreign country
  - voting in a foreign election

- any statement or action that shows allegiance to a country other than the United States (for example, declaration of intent to renounce U.S. citizenship; renunciation of U.S. citizenship)

Guideline D: Sexual Behavior

Indicators that could raise a concern:

- sexual behavior of a criminal nature, whether or not the individual has been prosecuted
- a pattern of compulsive, self-destructive, or high-risk sexual behavior that the person is unable to stop or that may be symptomatic of a personality disorder
- sexual behavior that causes an individual to be vulnerable to coercion, exploitation, or duress
- sexual behavior of a public nature and/or that which reflects lack of discretion or judgment

Guideline E: Personal Conduct

Indicators that could raise a concern:

- deliberate omission, concealment, or falsification of relevant facts
- deliberately providing false or misleading information concerning relevant facts
- disruptive, violent, or other inappropriate behavior in the workplace
- a pattern of dishonesty or rule violations

Guideline F: Financial Considerations

Indicators that could raise a concern:

- inability or unwillingness to satisfy debts
- indebtedness caused by frivolous or irresponsible spending and the absence of any evidence of willingness or intent to pay the debt or establish a realistic plan to pay the debt
- a history of not meeting financial obligations
- deceptive or illegal financial practices such as embezzlement, employee theft, check fraud, income tax evasion, expense account fraud, filing deceptive loan statements, and other intentional financial breaches of trust
- consistent spending beyond one's means, which may be indicated by excessive indebtedness, significant negative cash flow, high debt-to-income ratio, and/or other financial analysis

- financial problems that are linked to drug abuse, alcoholism, gambling problems, or other issues of security concern

- failure to file annual Federal, State, or local income tax returns as required or the fraudulent filing of tax returns

- unexplained affluence, as shown by a lifestyle or standard of living, increase in net worth, or money transfers that cannot be explained by the subject's known legal sources of income

- compulsive or addictive gambling as indicated by an unsuccessful attempt to stop gambling, "chasing losses" (that is, increasing the bets or returning another day in an effort to get even), concealment of gambling losses, borrowing money to fund gambling or pay gambling debts, family conflict, or other problems caused by gambling

Guideline G: Alcohol Consumption

Indicators that could raise a concern:

- alcohol-related incidents away from work, such as driving while under the influence, fighting, child or spouse abuse, disturbing the peace, or other incidents of concern, regardless of whether the individual is diagnosed as an alcohol abuser or as alcohol dependent

- alcohol-related incidents at work, such as reporting for work or duty in an intoxicated or impaired condition, or drinking on the job, regardless of whether the individual is diagnosed as an alcohol abuser or as alcohol dependent

- habitual or binge consumption of alcohol to the point of impaired judgment, regardless of whether the individual is diagnosed as an alcohol abuser or as alcohol dependent

- diagnosis by a duly qualified medical professional (for example, physician, clinical psychologist, or psychiatrist) of alcohol abuse or alcohol dependence

- evaluation of alcohol abuse or alcohol dependence by a licensed clinical social worker who is a staff member of a recognized alcohol treatment program

- relapse after diagnosis of alcohol abuse or dependence and completion of an alcohol rehabilitation program

- failure to follow any court order regarding alcohol education, evaluation, treatment, or abstinence.

Guideline H: Drug Involvement

Indicators that could raise a concern:

- testing positive for illegal drug use

- illegal drug possession, including cultivation, processing, manufacture, purchase, sale, or distribution; or possession of drug paraphernalia

- diagnosis by a duly qualified medical professional (for example, physician, clinical psychologist, or psychiatrist) of drug abuse or drug dependence

- evaluation of drug abuse or drug dependence by a licensed clinical social worker who is a staff member of a recognized drug treatment program

- failure to successfully complete a drug treatment program prescribed by a duly qualified medical professional

- any illegal drug use after being granted security clearance eligibility

Guideline I: Psychological Conditions

Indicators that could raise a concern:

- behavior that casts doubt on an individual's judgment, reliability, or trustworthiness that is not covered under any other guideline, including but not limited to emotionally unstable, irresponsible, dysfunctional, violent, paranoid, or bizarre behavior

- an opinion by a duly qualified mental health professional that the individual has a condition not covered under any other guideline that may impair judgment, reliability, or trustworthiness

- the individual has failed to follow treatment advice related to a diagnosed emotional, mental, or personality condition (for example, failure to take prescribed medication)

Guideline J: Criminal Conduct

Indicators that could raise a concern:

- a single serious crime or multiple lesser offenses

- discharge or dismissal from the Armed Forces under dishonorable conditions

- individual is currently on parole or probation

- violation of parole or probation or failure to complete a court-mandated rehabilitation program

Guideline K: Handling Protected Information

Indicators that could raise concern:

- deliberate or negligent disclosure of protected information to unauthorized persons,

- collecting or storing protected information in any unauthorized location

- loading, drafting, editing, modifying, storing, transmitting, or otherwise handling protected information on any unapproved equipment

- inappropriate efforts to obtain or view protected information outside one's need to know

- copying protected information in a manner designed to conceal or remove classification or other document control markings

- viewing or downloading information from a secure system when the information is beyond the individual's need to know

- any failure to comply with rules for the protection of sensitive information

Guideline L: Outside Activities

Indicators that could raise a concern:

- Any employment or service, whether compensated or volunteer, with the following:
  - the government of a foreign country
  - any foreign national, organization, or other entity
  - a representative of any foreign interest
  - any foreign, domestic, or international organization or person engaged in analysis, discussion, or publication of material on intelligence, defense, foreign affairs, or protected technology

- failure to report or fully disclose an outside activity when this is required

Guideline M: Use of Information Technology Systems

Indicators that could raise a concern:

- illegal or unauthorized entry into any information technology system or component thereof

- illegal or unauthorized modification, destruction, manipulation, or denial of access to information, software, firmware, or hardware in an information technology system

- use of any information technology system to gain unauthorized access to another system or to a compartmented area within the same system

- downloading, storing, or transmitting protected information on or to any unauthorized software, hardware, or information technology system

- unauthorized use of a Government or other information technology system

- introduction, removal, or duplication of hardware, firmware, software, or media to or from any information technology system without authorization, when prohibited by rules, procedures, guidelines, or regulations

- negligence or lax security habits in handling information technology that persist despite counseling by management

Reinvestigations and Ongoing Trustworthiness and Reliability Activities

Licensees must conduct a reinvestigation every 10 years for any individual with unescorted access to Category 1 or Category 2 quantities of radioactive material. The reinvestigation must consist of fingerprinting and an FBI identification and criminal history records check in accordance with the regulation in 10 CFR 37.27, "Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material." The reinvestigations must be completed within 10 years of the date when these elements were last completed.

The reinvestigation is not a complete check. It is limited to fingerprinting and the FBI criminal history records check; it does not need to include identification through employment verification or the character and reputation determination.

In addition, the basis for a judgment about an individual's dependability is limited to the information available at the time. However, if at any time between a licensee's initial investigation and the 10-year reinvestigation, the licensee receives information that would call into question that individual's dependability for the purposes of Subpart B, the licensee should not hesitate to reevaluate the basis for its earlier judgment. The regulation in 10 CFR 37.23(e)(4) specifically provides that an RO "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."

ANNEX B

SAMPLE CONSENT FORM FOR BACKGROUND INVESTIGATIONS

I authorize and grant my consent to my employer, (insert company name) (hereinafter "the company"), to request the U.S. Nuclear Regulatory Commission (NRC), under Section 652 of the Energy Policy Act of 2005, to request criminal record information about me from the U.S. Attorney General, who will refer the request to the Federal Bureau of Investigation. I understand that the purpose of this information is solely to enable the company to determine my trustworthiness and reliability for unescorted access to a Category 2 or greater quantity of radioactive material as defined in the NRC's regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material." I understand that the company must obtain my signed consent before any investigation or reinvestigation to determine my trustworthiness and reliability for such unescorted access.

I authorize and grant my consent to any authorized representative of the company who is conducting my background investigation or reinvestigation, as defined in 10 CFR 37.25, "Background Investigations," to obtain any information related to my activities from individuals, schools, residential management agents, previous employers, criminal justice agencies, or other sources of information. This information may include, but is not limited to, my academic, residential, achievement, or performance information and information about my attendance, disciplinary, employment, and criminal history records.

I authorize the Federal Bureau of Investigation to disclose the record of my criminal history background investigation to my employer for the purpose of making a determination of my trustworthiness and reliability for unescorted access to a Category 2 or greater quantity of radioactive material. I understand that before making any determination to deny me this unescorted access, the company will provide me a copy of the information on which it intends to base that determination. I further understand that before a final adverse determination, my employer must give me an opportunity to correct any inaccurate or incomplete information that is developed during the background investigation.

I understand that I may withdraw my consent at any time and that after I do withdraw my consent, under 10 CFR 37.23(c) of the NRC's regulations, the company may not initiate any elements of the background investigation that were not in progress at the time that I withdrew my consent. I also understand that, under 10 CFR 37.23(c), the withdrawal of my consent for the background investigation is sufficient cause for denial or termination of any authorization for unescorted access.

I understand that, for previous employers and other sources of information, separate specific releases may be needed and that I may be contacted for such releases at a later date. I authorize custodians of records and other sources of information pertaining to me to release such information upon request of the investigator or other duly authorized representative of the company regardless of any previous agreement to the contrary.

I understand that the information released by records custodians and other sources of information is solely for the purpose of making a determination about my trustworthiness and reliability for unescorted access to the radioactive materials subject to 10 CFR Part 37 and that this information may be disclosed only as authorized by State or Federal law.

I understand that photocopies of this authorization and consent document with my signature are valid and that this authorization will remain in effect as long as I am authorized to obtain unescorted access to the radioactive material subject to 10 CFR Part 37.

<table>
<tr><td colspan="3">Signature (In Ink) Full Name (Type or Print Legibly)</td><td colspan="2">Date Signed</td></tr>
<tr><td colspan="2">Other Names Used</td><td colspan="2">Date of Birth</td><td>Social Security No.</td></tr>
<tr><td>Current Street Address and Apartment No.</td><td>City and County</td><td>State</td><td>Zip Code</td><td>Home Telephone No.</td></tr>
</table>

ANNEX C

SAMPLE AFFIRMATION LETTER

Licensee name

Address

License number

Docket number

Date

Director, Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attn: Source Management and Protection Branch

Subject: Certification of Trustworthiness and Reliability in Accordance with 10 CFR 37.23(b)(2)

[Insert licensee's name] has named [insert designated reviewing official's name] to be a reviewing official. I certify under [oath or affirmation] that [insert designated reviewing official's name] is deemed trustworthy and reliable (T&R). [Insert licensee's name] made the T&R determination after reviewing information provided in a completed background investigation.

I declare [or certify, verify, state] under penalty of perjury that the foregoing is true and correct. Executed on [date].

[Title]

[Signature]

SUBPART C—PHYSICAL PROTECTION REQUIREMENTS DURING USE

§ 37.41, “Security Program”

§ 37.43, “General Security Program Requirements”

§ 37.45, “LLEA Coordination”

§ 37.47, “Security Zones”

§ 37.49, “Monitoring, Detection, and Assessment”

§ 37.51, “Maintenance and Testing”

§ 37.53, “Requirements for Mobile Devices”

§ 37.55, “Security Program Review”

§ 37.57, “Reporting of Events”

§ 37.41, "Security Program"

§ 37.41(a), "Applicability"

§ 37.41(a)(1)

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

EXPLANATION:

Each licensee that possesses aggregated Category 1 or Category 2 quantities of radioactive material must have a security program.

Q&As:

Q1: What is the purpose of a security program?

A1: The purpose of a security program under 10 CFR Part 37 is to plan and document how the licensee will protect Category 1 and 2 quantities of radioactive material. The program specifies how features, such as training, access controls, detection and assessment methods, and response capabilities, to provide reasonable assurance of the security of Category 1 or Category 2 quantities of radioactive material by protecting these materials from theft or diversion

Q2: What does it mean to have an "aggregated" quantity of radioactive material?

A2: The NRC considers radioactive material to be "aggregated" if someone could gain access to a Category 2 or greater quantity by breaching a single physical barrier. See the definition and Q&As for "Aggregated" in 10 CFR 37.5.

Q3: Does 10 CFR Part 37 apply if I have two or more sources at the same location that, when added together, meet or exceed a Category 2 threshold quantity?

A3: The regulations in 10 CFR Part 37 apply if there is no additional physical barrier between the sources or devices separating them into quantities below Category 2. In such a case, an intruder would have to defeat only one barrier at the security zone to gain access to a Category 2 or greater quantity of radioactive material. With only one barrier, the sources or devices are considered aggregated, and the licensee will have to develop and implement a security program. An example would be a high-dose afterloader with a backup source, where both sources together constitute a Category 2 quantity. Two sources stored in the same area behind a single barrier would be aggregated, and 10 CFR Part 37 would apply. In this same example of a high-dose afterloader and backup source, 10 CFR Part 37 would not apply if the licensee stores the backup source in a separate locked room or in a locked container that could not be removed, such as a safe. These would be considered additional barriers, and the afterloader and backup source would no longer meet the definition of "aggregated" because they would no longer be isolated by a single physical barrier.

Q4: How do I determine whether I possess a Category 1 or Category 2 quantity of radioactive material?

A4: The licensee should use the sum-of-fractions method, also known as the unity rule, to determine if it possesses a Category 1 or Category 2 quantity of radioactive material. The licensee may need to implement 10 CFR Part 37 requirements even if it does not possess any single source or single radionuclide in excess of a Category 2 threshold. For combinations of materials (including 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 must consider all the radioactive material they possess under their licenses at the location in question.

The licensee can use the following formula for the unity rule to determine if it has a Category 2 quantity and if it must implement 10 CFR Part 37 requirements:

$$\sum_{1}^{n}\left[\frac{R_1}{AR_1}+\frac{R_2}{AR_2}+\ldots+\frac{R_n}{AR_n}\right]\geq 1.0,$$

where:

R_1 = total amount of radionuclide 1
AR_1 = Category 2 threshold of radionuclide 1
R_2 = total amount of radionuclide 2
AR_2 = Category 2 threshold of radionuclide 2
R_n = total amount of radionuclide n
AR_n = Category 2 threshold of radionuclide n

The licensee would use the same unity rule formula above to determine if it has a Category 1 quantity for purposes of implementing 10 CFR Part 37 requirements by substituting the Category 1 threshold value as the divisor for each radionuclide. The Category 1 thresholds in 10 CFR Part 37, Appendix A are 100 times the Category 2 thresholds.

The licensee must use terabecquerel (TBq) thresholds in all unity rule calculations because TBq is the regulatory standard (using Ci values may lead to incorrect conclusions about the applicability of 10 CFR Part 37). Therefore, the licensee must use the following formula to convert any Ci values in its license to TBq:

n (TBq) = *N* (Ci) x 0.037 TBq/Ci

See the Q&As for the definitions of Category 1 and Category 2 quantities in 10 CFR 37.5 for examples illustrating the unity rule and terabecquerel conversion calculations.

Q5: If I have radioactive materials aggregated to a Category 2 or greater quantity, what do I have to do to meet the separate requirements of 10 CFR 37.41(a)(1) to "establish," to "implement," and to "maintain" a security program?

A5: To "establish" the security program, the licensee must develop a written security plan that describes a strategy and a set of technologies and must develop measures that, when implemented with written procedures that are also required, will demonstrate compliance with each of the applicable requirements in Subpart C of this rule. Under 10 CFR 37.41(c) below, the security program must, as appropriate, include the program features described in 10 CFR 37.43, "General Security Program Requirements"; 10 CFR Parts 37.45; 37.47; 37.49; 37.51; 37.53; and 37.55, "Security Program Review." The specific measures that must be implemented under the security program should include the establishment of security zones; the design and procurement of a physical protection system for monitoring, detection, assessment, and alarm/communication; the procurement of any necessary support services, such as a commercial security service between normal working hours; and coordination with affected LLEAs. The program must also include recordkeeping measures and must provide for the operation, testing, and maintenance of equipment and technologies that, when functioning as an integrated system with the other measures required under this section, are designed to effectively 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.

To "implement" the security program, the licensee must have trained necessary staff under 10 CFR 37.43(c) to follow its program procedures; must have installed and must be using all the access control measures or systems required under 10 CFR 37.43(a)(1)(ii); must have completed LLEA coordination efforts under 10 CFR 37.45; must have installed the physical barriers protecting each security zone in accordance with 10 CFR 37.47; and must have installed and must be using all the monitoring, detection, and alarm/communications systems required under 10 CFR 37.49. The licensee must also have placed into service all the appropriate other measures, such as those for testing and maintenance under 10 CFR 37.51; those for mobile devices under 10 CFR 37.53; those for reporting of events under 10 CFR 37.55; and those for program reviews under 10 CFR 37.57, "Reporting of Events," that are required by this part and that the licensee will rely on to meet the performance objectives of 10 CFR 37.41(b).

To "maintain" the security program, the licensee must show that it has implemented and is continuing to fund the program's access authorization and control, training, monitoring, detection, assessment, alarm and communication, and LLEA coordination activities and to inspect, test, and repair the equipment installed to keep it functioning properly. The licensee will also need to periodically evaluate and update operating, training, and LLEA coordination procedures and other measures required by this part, as appropriate, to address lessons learned and to ensure the continuing compliance of the system that it has designed and implemented to meet the performance objectives of 10 CFR 37.41(b).

Q6: Must I have a security program for temporary jobsites?

A6: Yes. If a licensee has a Category 1 or Category 2 quantity of radioactive material at a temporary jobsite, it must have a security program that meets the requirements of 10 CFR Part 37. However, this does not mean that the licensee must develop and implement a security program specifically for each temporary jobsite. It only means that the licensee's security plan under 10 CFR 37.43(a) must address the security of its Category 1 or Category 2 quantities of radioactive material during work at temporary and permanent jobsites. Additionally, when transporting radioactive material in such quantities to and from a temporary jobsite, the licensee must control access and must monitor, detect, assess, and respond to an actual or attempted theft, sabotage, or diversion. These measures against unauthorized access

must also be applied when the transport vehicle is stopped at a hotel, restaurant, gas station, or other location. See the Q&As on 10 CFR 37.79(a)(2).

Q7: If I'm a licensed contract radiographer, and I must leave a radiography camera at another licensee's or customer's facility that provides its own site security, who is responsible for security? When I'm expected to leave a camera on site at an oil refinery, for example, who provides security there, and if the customer provides the security, how can I know whether the security satisfies 10 CFR Part 37?

A7: A licensee that possesses radioactive material is responsible for its security and control, and the licensee must meet 10 CFR Part 37 security requirements in its own facility and in a customer's facility. If the licensee chooses to store one of its devices at a customer's facility, the licensee and the customer must ensure that they meet the applicable 10 CFR Part 37 requirements. The licensee will need to evaluate if its customer's physical protection program will comply with the applicable 10 CFR Part 37 requirements at the agreed storage location. In addition, the licensee and the customer should have a clear understanding of the licensee's respective roles and responsibilities and the features of the customer's security and control program that must be relied on to meet the applicable security requirements for the licensee's device. The licensee should assess the customer's security systems and measures against those of its own program for implementing these requirements.

§ 37.41, "Security Program" (continued)

§ 37.41(a), "Applicability"

§ 37.41(a)(2)

An applicant for a new license and 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 an aggregated category 1 or category 2 quantity of radioactive material.

§ 37.41(a)(3)

Any licensee that has not previously implemented the Security Orders or been subject to the provisions of subpart C shall provide written notification to the NRC regional office specified in § 30.6 of this chapter at least 90 days before aggregating radioactive material to a quantity that equals or exceeds the category 2 threshold.

EXPLANATION:

New license applicants and licensees newly subject to 10 CFR Part 37 must implement the requirements of Subpart C before taking possession of an aggregated Category 1 or Category 2 quantity of radioactive material. A licensee that has not been subject to the provisions of Subpart C must notify the appropriate NRC regional office in writing at least 90 days before aggregating radioactive material to a quantity that equals or exceeds the Category 2 threshold.

Q&As:

Q1: At what point in the process of transferring possession of radioactive material would I be considered to have "taken possession" of a Category 1 or Category 2 quantity of radioactive material? For example, have I "taken possession" of a source under 10 CFR Part 37 when the carrier or delivery service crosses my site boundary? When the carrier has brought the source into my facility building? When the source is in a permanent security zone on my site?

A1: The NRC considers the licensee to have taken possession of a Category 1 or Category 2 quantity of radioactive material when it has accepted the consignment of the material from the shipper or transferring licensee and has assumed physical control of the material. Thus, the NRC considers that the licensee has *not* taken possession when the shipper has crossed the licensee's site boundary or has brought the source into a building on the licensee's facility site unless the licensee accepts the consignment and assumes physical control of the material at that point. If accepting the consignment causes the licensee to have aggregated radioactive material in a Category 2 or greater quantity, it must meet the requirements in 10 CFR Part 37. If the licensee orders new byproduct material that would put it over the Category 2 limit for an aggregated quantity when the material arrives at its facility, it should have established its security program before it ordered the material, including the access authorization program required by Subpart B. The licensee must provide written notification to the NRC regional office specified in § 30.6 of this chapter at least 90 days before aggregating radioactive material to a quantity that equals or exceeds the category 2 threshold.

Q2: Would I be considered to have "taken possession" if the carrier delivers a shipment and then leaves without my having accepted the consignment?

A2: Yes. The licensee would be held accountable if the carrier left a shipment on the doorstep or loading dock. The licensee is responsible for arranging for receipt of the shipment. However, this scenario, except in extreme or emergency circumstances, is highly unlikely. Under 10 CFR 37.79(a)(3)(iii), the shipping licensee must use a carrier that requires a signature for receipt of Category 2 shipments.

Q3: If I am receiving multiple deliveries of radioactive material, when would I be considered to have taken possession of an "aggregated" Category 1 or Category 2 quantity of radioactive material?

A3: The NRC would consider the licensee to have taken possession of an "aggregated" Category 1 or Category 2 quantity of radioactive material when and if the licensee places an accumulated quantity at or above the Category 2 threshold behind a single physical barrier. If the licensee places one or more of these deliveries in a total quantity that is less than Category 2 behind a separate, independent physical barrier, the licensee is not taking possession of an "aggregated" quantity of material as defined in 10 CFR Part 37.

§ 37.41, "Security Program" (continued)

§ 37.41(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.

§ 37.41(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.

EXPLANATION:

This provision establishes the general performance objective of the security program and specifies the features it must include, as appropriate.

Q&As:

Q1: What does it mean for a licensee's security program to be designed to detect, assess, and respond to an unauthorized access event "without delay"?

A1: The licensee must have a security program that enables it to detect unauthorized access to the security zone when it occurs, to determine whether the unauthorized access was an actual or attempted theft, and to initiate an appropriate response immediately. The objectives are to reduce the possibility that the material will be stolen and used for an unauthorized purpose and, if it is stolen, to increase the likelihood of timely recovery or to mitigate potential consequences.

Q2: What's the difference between "actual" and "attempted" unauthorized access? Wouldn't the same kinds of measures apply to both?

A2: Yes, the same kinds of measures apply to both. Although the measures for immediate detection and assessment of and response to *actual* unauthorized access to radioactive materials also will be required for *attempts* to gain unauthorized access, licensees should be alert for covert actions in preparation for an attempted theft, sabotage, or diversion. For example, such covert actions could include the theft and copying of keys to locked rooms or storage containers or the gaining of access to security codes for copying onto duplicate key cards. Licensees should therefore monitor, assess, and respond to actual or attempted unauthorized access to keys, security cards, codes, or other means that could be used in an attempt to gain unauthorized access to the material in a security zone.

Q3: Can licensees use measures required for radiation safety to comply with 10 CFR Part 37 security requirements too?

A3: Yes. The licensee may use or modify systems used to control access to high-radiation areas, as required by 10 CFR Part 20, "Standards for Protection against Radiation,"

or equivalent Agreement State regulations, or other detection and access control systems used for radiation protection for security purposes as long as the uses or modifications do not compromise the original safety purpose of these systems. Documentation should describe how these systems provide the required intrusion detection.

Q4: What are the principal requirements of a security program?

A4: The licensee must have a security program to continuously monitor and to immediately detect unauthorized access to Category 1 or Category 2 quantities of radioactive material when the unauthorized access occurs. The program also must enable the licensee to determine if the unauthorized access is an actual or attempted theft and to initiate an appropriate response without delay. The detection system must be capable of detecting all reasonably foreseeable unauthorized access to the security zone, including breaches of barriers used to isolate and control access to the protected radioactive material. It must also be capable of detecting an unauthorized removal of protected material from security zones. Either automated devices or trained personnel who can initiate the appropriate response can assess the unauthorized access. Licensees should consider the possibility of simultaneous alarms at multiple locations. The program's documentation must also describe the processes that the licensee will use to assess and respond to unauthorized access.

A licensee's security program must include a written security plan, implementing procedures, training, the use of security zones, the protection of information, requests for coordination with the cognizant LLEA(s), additional security measures for mobile devices (if applicable), testing and maintenance of security-related equipment, an annual program review, and incident reporting requirements. The following Q&As discuss each of these areas in more detail.

§ 37.43, "General Security Program Requirements"

§ 37.43(a), "Security Plan"

§ 37.43(a)(1)

Each licensee identified in § 37.41(a) shall develop a written security plan specific to its facilities and operations. 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:

§ 37.43(a)(1)(i)

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

§ 37.43(a)(1)(ii)

Identify the security resources, equipment, and technology used to satisfy the requirements of this subpart.

EXPLANATION:

Subject licensees must develop a written security plan with an overall security strategy to ensure the integrated and effective functioning of the security program. This subsection also specifies minimum contents of the security program.

Q&As:

Q1: Must licensees submit their written security plans to the NRC?

A1: No. The regulations in 10 CFR Part 37 do not require and the NRC does not want licensees to submit security plans or implementing procedures to the agency for review or approval. The security plan will be subject to NRC inspection.

Q2: What must a licensee's security plan address?

A2: As noted in 10 CFR 37.43(a)(1), the plan must, among other things, describe the measures and strategies to implement the security requirements and identify the resources, equipment, and technology used. As good practice in explaining its overall strategy, the licensee should ensure that its security plan describes any site-specific conditions that affect how it will implement the requirements. 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 clearly how it will implement its chosen security measures to ensure that they work together to meet the applicable performance objectives.

To ensure the integrated and effective functioning of the security program and to facilitate its meeting the program review requirements in 10 CFR 37.33, "Access Authorization Program

Review," the licensee also may consider describing in the security plan a process for identifying and implementing corrective actions or compensatory measures in the event of a failure of personnel or equipment to perform as specified or function as required.

One method for developing a security plan would be to structure the plan in accordance with Appendix II to the IAEA's 2009 implementing guide entitled "Security of Radioactive Sources" (IAEA Nuclear Security Series No. 11).

Although Appendix II to the guide notes that "[t]he level of detail and depth of content [of a licensee's security plan] should be commensurate with the security level of the source(s) covered by the plan" and although not all of the recommended measures may apply to a given licensee's situation, the appendix recommends the contents of a typical security plan for the radioactive materials subject to 10 CFR Part 37. For easy reference, the following list provides these contents:

- a description of the radioactive material, its categorization, and its use
- a description of the environment, building, and facility in which the radioactive material is used or stored and, if appropriate, a diagram of the facility layout and security system
- the location of the building or facility relative to areas accessible to the public
- local security procedures
- objectives of the security plan for the specific building or facility, including the following:
  - the specific concern that will be addressed (e.g., unauthorized removal, destruction, or malevolent use)
  - the kind of control necessary to prevent undesired consequences, including the auxiliary equipment that might be needed
  - the equipment or premises that will be secured
- security measures that will be used, including the following:
  - the measures to secure, provide surveillance, provide access control, detect, delay, respond, and communicate
  - the design features to evaluate the quality of the measures against the assumed threat
- administrative measures that will be used, including the following:
  - security roles and responsibilities of management, staff, and others
  - routine and nonroutine operations, including an accounting of the source(s)
  - maintenance and testing of equipment
  - a determination of the trustworthiness of personnel

- the application of information security
- methods for access authorization
- security-related aspects of the emergency plan, including event reporting
- training
- key control procedures

- procedures to address an increased threat level
- the process for periodically evaluating the effectiveness of the plan and updating it accordingly
- any compensatory measures that may be needed
- references to existing regulations or standards

Q3: Can the security plan and implementing procedures be in the same document?

A3: Yes. However, any document or group of documents that contains both the security plan and its implementing procedures must meet the respective requirements in 10 CFR 37.41(a) and 10 CFR 37.41(b) for each of these program elements.

Q4: Is a licensee required to develop specific additional contingency plans for situations where a facility or site needs to evacuate staff because of an emergency, natural disaster, or other events threatening public health and safety?

A4: The regulations in 10 CFR Part 37 do not specifically require a licensee to develop any contingency plans as such; however, contingency planning is considered a best practice in the development of security plans. The NRC encourages licensees to develop contingency planning as consistent with the intent of 10 CFR Part 37 and the security culture it seeks to promote. Because licensees are required to ensure the security and accountability of the radioactive material protected under this part, they should also consider measures to maintain this security and accountability in the event of an evacuation, power loss, or other emergency. These plans should address events, such as floods, earthquakes, wild fires, and tornadoes, that have an increased probability of occurring in the area where the facility or site is located.

Q5: Should the radiation safety office or officer be involved in the development or implementation of security plans and procedures?

A5: Although RSOs and their staff may not be the licensee's experts in security, they should be involved because they can provide valuable insights for considering safety and security risks in a system integrated way. The RSO can also provide advice and analysis to ensure that the licensee is implementing security requirements in a manner that does not compromise safety.

Q6: If I already have a high-level corporate security plan in place that meets the requirements of 10 CFR 37.43(a), do I still have to develop and implement a separate security plan to demonstrate compliance with 10 CFR Part 37?

A6: No. As long as a preexisting site or corporatewide plan meets the content requirements of Subpart C for the security plan, the NRC would consider the plan acceptable, and the licensee would not have to develop a new plan. Each site would need to have a copy of the plan for implementation and to produce it during inspection.

Q7: If I'm a licensee possessing a Category 2 or greater quantity of radioactive material and I hire a service contractor licensed by the NRC or another Agreement State, do the requirements of the contractor's security program govern the contractor employee when he or she is on my site, or must the contractor employee comply with the requirements of my security program?

A7: The answer to this question depends on the authorization for possession of the material. If the licensee is authorized to possess the radioactive material or the devices that contain the material (for example, a hospital possessing a gamma stereotactic radiosurgery device), the licensee's security program would govern the contractor. If the contractor possesses the material or device, such as a radiography camera that the contractor brings to the licensee's site, the contractor's security requirements would apply to the use and control of that material or device.

§ 37.43, "General Security Program Requirements" (continued)

§ 37.43(a), "Security Plan"

§ 37.43(a)(2)

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

EXPLANATION:

This text is self-explanatory.

Q&As:

Q1: Who should be considered "the individual with overall responsibility for the security program"?

A1: The licensee can designate this person. The individual can be the company president, chief executive, the RSO, or any other individual who has been designated as the responsible person for the security program. The individual responsible for the security of all the licensee's Category 1 or Category 2 quantities of radioactive material is the appropriate individual to provide written approval of the plan.

§ 37.43, "General Security Program Requirements" (continued)

§ 37.43(a), "Security Plan"

§ 37.43(a)(3)

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

§ 37.43(a)(3)(i)

The revision has been reviewed and approved by the individual with overall responsibility for the security program; and

§ 37.43(a)(3)(ii)

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

EXPLANATION:

A licensee must revise its security plan as needed to ensure effective implementation. The individual with overall responsibility for the security program must review and approve any revision, and the licensee must instruct the affected individuals on the revised plan before it implements the changes.

Q&As:

Q1: How frequently should I revise my security plan?

A1: There is no predetermined frequency for the revision of the security plan. The licensee may want to revise its plan after the completion of the annual security program review so that the revised plan addresses any recommendations. The licensee may need to revise its security plan (1) if it increases the quantity of radioactive material that it has aggregated at a given location, (2) if it moves the location of a storage area for an aggregated quantity, or (3) if it alters its facility in a way that could affect the security of its licensed radioactive material subject to this part. In addition, the licensee would need to revise its security plan before it changes the measures that it relies on to comply with 10 CFR Part 37. For example, if the licensee plans to shift from direct surveillance to an offsite monitored alarm system, it would need to address that change in revisions to its security plan and procedures.

Q2: Who should approve revisions to the security plan under 10 CFR 37.43(a)(3)(i)?

A2: The individual who has overall responsibility for the security program must approve the revised security plan. As noted in the Q&As for 10 CFR 37.43(a)(2), the approving individual may be the company president, chief executive, the RSO, or any other individual who has been given the responsibility for the security program.

Q3: The regulation in 10 CFR 37.43(a)(3)(ii) requires me to ensure that "affected individuals" are "instructed" on the revised plan before the changes are implemented. How broadly or narrowly should I define "affected individuals"? Do I have to retrain all my employees and any service contractor employees before I can put any change in my security plan into effect?

A3: No. The licensee does not need to retrain all its employees or contractors before changing its security plan. The licensee must retrain only those employees whose responsibilities or job duties would be affected by the change.

Q4: The regulation in 10 CFR 37.43(a)(3)(ii) requires me to ensure that these affected individuals are "instructed" on the revised plan before the changes are implemented. How can the "affected individuals" show that they have been sufficiently "instructed"? Must all the affected individuals get a passing score on a proficiency exam or demonstrate the needed new skills before I can put the change into effect?

A4: No. The licensee does not need to require all the affected individuals to pass a proficiency exam or demonstrate mastery of the necessary skills before making a change in its security plan. Depending on the change, the instruction could include the reading of new procedures, a briefing on the new item(s), or on-the-job training. As with any training, the licensee needs to document that the training occurred. The licensee should consider the scope of the security plan revision in relation to the scope of each individual's job duties to identify those individuals who may need to show a more measurable level of knowledge or skill to ensure the effective or timely implementation of the change in its security plan. A change that would affect the licensee's policy on employee observation or on the reporting of suspicious activities may require only a briefing before its implementation. As a good practice to demonstrate compliance with this instruction requirement, the licensee should require the affected individuals to sign a statement that they have read and are familiar with the relevant portion of the security plan and procedures.

§ 37.43. "General Security Program Requirements" (continued)

§ 37.43(a), "Security Plan"

§ 37.43(a)(4)

The licensee shall retain a copy of the current security plan as a record for 3 years after the security plan is no longer required. If any portion of the plan is superseded, the licensee shall retain the superseded material for 3 years after the record is superseded.

EXPLANATION:

This text is self-explanatory.

Q&As:

Q1: If I've received a license amendment that reduces my possession limits to quantities below a Category 2 threshold, and my prelicense amendment records are inspected a few months or a year later, am I still required to maintain these records for the rest of the 3-year period?

A1: Yes. The licensee must retain most records, including those preceding its license amendment, for 3 years. However, it must maintain some records until its license is terminated. In the case of the security plan, the licensee must retain the record for 3 years after the plan is no longer needed. The licensee may destroy all records related to 10 CFR Part 37 once its license has been terminated.

Q2: What does it mean for the security plan or any portion of it to be "superseded"?

A2: The NRC would consider the security plan to be "superseded" once a revision to the plan has been approved. To be considered superseded, a plan can be completely revised or partially revised. The licensee would need to retain a copy of the old security plan for 3 years or until license termination if that occurs first.

§ 37.43, "General Security Program Requirements" (continued)

§ 37.43(b), "Implementing Procedures"

§ 37.43(b)(1)

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

§ 37.43(b)(2)

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

§ 37.43(b)(3)

The licensee shall retain a copy of the current procedure as a record for 3 years after the procedure is no longer needed. Superseded portions of the procedure must be retained for 3 years after the record is superseded.

EXPLANATION:

Subject licensees must have written procedures that document how they will implement the security plan and other Subpart C requirements. The individual with overall responsibility for the program must approve, in writing, procedures and future revisions. The licensee must keep a copy of the current procedure as a record for 3 years after the procedure is no longer required. If any portion is superseded, the licensee must keep the superseded material for 3 years.

Q&As:

Q1: Am I required to develop security procedures if I don't actually possess a Category 2 quantity of material?

A1: No. A licensee needs to develop security procedures only if it possesses an aggregated quantity that meets or exceeds the Category 2 threshold and must therefore implement a security program. If a licensee plans to obtain additional radioactive material or to relocate currently possessed radioactive material into an aggregated quantity that meets or exceeds the Category 2 threshold, it must establish its security program before it can obtain or relocate the material. This would include having the procedures in place.

Q2: What must a licensee's security procedures address?

A2: Generally, the security procedures must address how the licensee will implement the applicable features required by Subpart C. Depending on the licensee and its operating requirements, these features would require procedures for the following:

- training
- establishing and maintaining security zones
- establishing the monitoring, detection, assessment, and response measures
- establishing and maintaining equipment maintenance and testing measures
- describing how to report events
- describing the conduct and documentation of the annual review of the overall program

The written procedures should also address how the licensee will respond to a range of foreseeable events common to the type of license. Examples of such events could range from an inadvertent unauthorized access that would not require an LLEA response to a malevolent intrusion that would require LLEA intervention. These procedures should include, if applicable, provisions for immediate response, for after-hours notification of LLEAs and the licensee's person responsible for security, for the handling of both radiation safety and security-related types of emergencies, and for events at temporary jobsites.

Procedures should also address the roles of the licensee's staff and, where applicable, its contractors. The licensee's staff and contractors must have a clear understanding of their responsibilities and constraints in an emergency, along with step-by-step instructions and clear guidelines for whom to contact. However, when developing these security procedures, the licensee must not compromise facility operational safety, occupational safety, fire safety, and emergency planning at the facility.

Q3: Is there flexibility in the 10 CFR Part 37 implementation process?

A3: Yes. The regulations in 10 CFR Part 37 are purposely not prescriptive, which allows licensees to tailor programs to their specific facility and operations. Licensees can choose various approaches to meeting the objectives of10 CFR Part 37, and no one solution exists for any material control challenge facing licensees. This guidance document gives examples of how licensees may meet 10 CFR Part 37 requirements. Licensees do not have to implement any of the examples in the guidance; each example describes only one acceptable method that licensees can use to comply with 10 CFR Part 37 requirements.

Q4: Who can approve implementing procedures?

A4: The individual considered to have overall responsibility for the licensee's security program must approve any security implementing procedures. (See 10 CFR 37.43(b)(2).)

Q5: What does it mean for the security procedure or any portion of it to be "superseded"?

A5: A procedure is superseded when a new version of the procedure is issued. A procedure can be completely revised or partially revised to be considered superseded. The licensee must retain a copy of the old procedure for 3 years or until license termination, whichever occurs first.

§ 37.43, "General Security Program Requirements" (continued)

§ 37.43(c), "Training"

§ 37.43(c)(1)

Each licensee shall conduct training to ensure that those individuals implementing the security program possess and maintain the knowledge, skills, and abilities to carry out their assigned duties and responsibilities effectively. The training must include instruction in:

§ 37.43(c)(1)(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;

§ 37.43(c)(1)(ii)

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

§ 37.43(c)(1)(iii)

The responsibility of the licensee 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

§ 37.43(c)(1)(iv)

The appropriate response to security alarms.

§ 37.43(c)(2)

In determining those individuals who shall be trained on the security program, 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.

EXPLANATION:

Individuals implementing the security program must be trained. The training must cover the program and its procedures, the purpose and function of the security measures, and the individual's responsibilities. The extent of the training must be commensurate with the individual's potential involvement in radioactive material security.

Q&As:

Q1: What is the purpose of the training program?

A1: The purpose of the training program is to ensure that those employees who are responsible for implementing security measures know what is expected of them and how to do their job.

Q2: What minimum elements must a training program include?

A2: A licensee's training program should be evaluated against the Subpart C performance objective of ensuring that each individual with responsibility for any aspect of the security program has the requisite knowledge, skills, and abilities to carry out that responsibility effectively. Thus, the minimum scope of a training program should identify these individuals and identify the working knowledge, skill sets, and capabilities they need to carry out their assigned duties and responsibilities for effective implementation of the licensee's security plan. The licensee's staff members must clearly understand their individual responsibilities and constraints in an emergency, and training should provide step-by-step instructions and clear guidelines for what to do and whom to contact. In addition, an adequate program must ensure that employees will be able to identify any "condition[s] that cause…or may cause a violation" of Commission requirements and to identify and report suspicious activities.

Examples of appropriate subjects for training would include the controls that are in place to prevent unauthorized access to material, the purpose and functional requirements of the licensee's alarm and access control systems, notification procedures in the event of an unauthorized access for potential malevolent activities, and ways to confirm quickly and accurately if an intrusion is likely to be intentional or accidental. An adequate program should also cover the operation of primary and backup communication systems for such reporting. In addition, the training should provide step-by-step instructions and clear guidelines on the proper performance of testing and maintenance activities. The licensee should train those employees who will be conducting surveillance on what to look for and how to respond when they see something unusual.

Training does not need to be in a classroom and can be performed as a part of on-the-job training. Training may be organized by subject area as well. For example, the licensee might train most of its employees on general alarm response but only certain employees on escort responsibilities.

Q3: What "potential situations" involving theft, diversion, or sabotage should a licensee consider when determining who should be trained?

A3: No single set of potential security situations would apply to every licensee's individual security needs. The licensee must evaluate potential situations for the monitoring, detection, assessment, and response functions needed for a timely and effective response. These situations range from an inadvertent unauthorized access that would not require an LLEA response to a malevolent intrusion that would. The training should include provisions for immediate response, for after-hours notification of LLEAs and licensee management, and for the handling of credible radiation safety problems that could result from postulated security situations. Where applicable, the licensee should also develop training requirements for security events at temporary jobsites.

Q4: The rule requires the extent of the licensee's security training for affected individuals to be "commensurate with the individual's potential involvement" in the subject material's security. Should all individuals with a valid reason to be on site be considered to have "potential involvement" in a security emergency and, therefore, require training?

A4: No. Although it is good practice to provide some basic training to all employees (e.g., details on how to respond to an alarm), only those individuals with security responsibilities must be trained. If an employee does not have unescorted access to the radioactive material, does not have access to any security information, and has no security duties, he or she may not need to receive any security training beyond the basics of safely responding to alarms. In addition, not all individuals need to receive the same level of training.

Q5: How should a licensee demonstrate that the individuals responsible for implementing the security plan have acquired the necessary "knowledge, skills, and abilities" to carry out their assigned duties and responsibilities "effectively"?

A5: Although testing is not required, one measure of a trainee's ability to carry out assigned security responsibilities is evidence that the trainee took and passed a reasonable test of the knowledge, skill, or ability objectives of the training. Another measure of the likelihood that an employee or contractor will be able to carry out assigned security responsibilities is evidence that he or she has successfully participated in a drill or exercise designed to test the entire security system, including monitoring, detection, assessment, and response. Using such systemwide drills or tabletop exercises, and notifying affected LLEAs of opportunities to participate in such training, can be an especially effective way for some licensees to train their personnel.

However, depending on the frequency and relative complexity of an individual's assigned duties, adequate training can also be demonstrated through the daily or weekly conduct of that individual's job. This could be especially true for some elements of refresher training. For example, if the individual is a security guard who makes regular checks on designated work locations or who must report the operating status of security equipment at specified intervals, the employee's routine fulfillment of these job duties may be sufficient evidence that he or she needs no further training in these duties, at least until new equipment, new technologies, or new procedures necessitate new training.

§ 37.43, "General Security Program Requirements" (continued)

§ 37.43(c), "Training" (continued)

§ 37.43(c)(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:

§ 37.43(c)(3)(i)

Review of the training requirements of paragraph (c) of this section and any changes made to the security program since the last training;

§ 37.43(c)(3)(ii)

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

§ 37.43(c)(3)(iii)

Relevant results of NRC inspections; and

§ 37.43(c)(3)(iv)

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

§ 37.43(c)(4)

The licensee shall maintain records of the initial and refresher training for 3 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.

EXPLANATION:

The licensee must provide refresher training at least every 12 months and when significant changes have been made to the security program. The subsection specifies what the refresher training must include and states that licensees must keep training records for 3 years.

Q&As:

Q1: How frequently should licensees provide refresher training?

A1: The regulation in 10 CFR 37.43(c)(3) requires the licensee to conduct refresher training at least every 12 months or sooner if the security program has changed significantly.

Q2: What should be included in refresher training?

A2: Developers of refresher training should review the training requirements of 10 CFR 37.43(c)(1) and 10 CFR 37.43(c)(2) and should address any changes to the security program since the last training, any changes in the assigned responsibilities of individual trainees that would require new training, recent information on any relevant security issues or lessons learned, relevant results from the annual program review or any NRC inspections, relevant operating experience from the maintenance and testing program for security systems or system components. In addition, a licensee should consider providing refresher training after a security-related event so that affected or potentially affected employees promptly understand what happened and how to avoid or mitigate the consequences of a recurrence.

Q3: Under 10 CFR 37.43(c)(3)(ii), (iii), and (iv), what does the NRC consider "relevant" for purposes of refresher training?

A3: The term "relevant" is a common term and, in this case, simply refers to items that are related to security. Examples of items that refresher training should include are areas in which the staff has had trouble following the security requirements, areas in which corrective actions have not been effective or lessons learned have not addressed root causes of past or potential security deficiencies and new actions are required, violations of 10 CFR Part 37 security requirements or conditions adverse or potentially adverse to security that have been discussed in an inspection report, and measures necessary to fix any security issues that have been identified in the licensee's program review or testing and maintenance results.

Q4: When we give LLEA representatives a copy of our security plan, do we have to test them on their understanding?

A4: No. A licensee may, at its discretion, provide a copy of its security plan to the affected LLEA for information. However, the licensee is not required to provide a copy, nor does the NRC expect it to train an LLEA on its security plan. The plan itself applies only to the licensee and its employees and contractors.

§ 37.43, "General Security Program Requirements" (continued)

§ 37.43(d), "Protection of Information"

§ 37.43(d)(1)

Licensees authorized to possess category 1 or category 2 quantities of radioactive material shall limit access to and unauthorized disclosure of their security plan, implementing procedures, and the list of individuals that have been approved for unescorted access.

§ 37.43(d)(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, implementing procedures, and the list of individuals that have been approved for unescorted access.

§ 37.43(d)(3)

Before granting an individual access to the security plan, implementing procedures, or the list of individuals that have been approved for unescorted access, licensees shall:

§ 37.43(d)(3)(i)

Evaluate an individual's need to know the security plan, implementing procedures, or the list of individuals that have been approved for unescorted access; and

§ 37.43(d)(3)(ii)

If the individual has not been authorized for unescorted access to category 1 or category 2 quantities of radioactive material, safeguards information, or safeguards information-modified handling, the licensee must complete a background investigation to determine the individual's trustworthiness and reliability. A trustworthiness 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)(7).

EXPLANATION:

Licensees must limit access to, and unauthorized disclosure of, their security plans, implementing procedures, and lists of individuals approved for unescorted access. Licensees must have written policies and procedures for the control of access to those documents and for the proper handling of, and protection against, unauthorized disclosure.

Licensees must evaluate an individual's need to know before allowing him or her access to the security documents. If the individual has not been authorized for unescorted access, he or she must undergo a background investigation to determine his or her T&R before being provided the protected information.

Q&As:

Q1: What kinds of information are licensees required to protect under this subsection?

A1: Licensees are required to limit access to their security plans and implementing procedures to prevent unauthorized disclosure. Licensees also are required to limit access to their list of individuals approved for unescorted access. This includes the information contained in the protected documents.

Q2: Should I protect any forms of information other than hardcopies of sensitive information?

A2: Yes. The licensee should protect against any form of unauthorized disclosure of the protected information, including spoken and electronic disclosures.

Q3: Who is allowed access to this protected information?

A3: Licensees may allow access to these documents only to those individuals who have a need to know the information (e.g., human resources, information technology, and security staff) to perform their duties and who have been determined to be trustworthy and reliable based on the background investigation requirements in 10 CFR 37.25(a)(2)–(7). This includes information technology staff or other individuals with access to computer systems or storage cabinets containing the security plan, implementing procedures, or list of individuals approved for unescorted access. Licensee employees, agents or contractors, and employees of an organization affiliated with the licensee's company (e.g., a parent company) may be considered employees of the licensee for access purposes.

To allow a third party (e.g., contractors, consultants) access to protected information under 10 CFR 37.43(d), the licensee would need to conduct a background investigation and T&R determination of the third-party individuals under 10 CFR 37.43(d)(3)(ii). If the third party is a security service provider, the service provider can conduct a background investigation and T&R determination under 10 CFR 37.43(d)(4)(ii) and provide them to the licensee.

If a licensee sees any indication that the recipient would be unwilling or unable to provide proper protection for sensitive information, the licensee should not authorize that individual to receive it.

Licensees must also ensure that individuals who are not authorized to receive such information do not overhear conversations related to the substantive portions of the sensitive information.

Q4: If I have a documented basis for having found an individual to be trustworthy and reliable for unescorted access to radioactive material under 10 CFR 37.25(a), can that individual have access to my security plan and procedures without redundant additional screening?

A4: Yes. However, the individual must have a need to know the information.

Q5: If I need to hire a new employee who will need access to the protected security information, can I accept a current background investigation from another licensee for a prospective new hire transferring from that licensee?

A5: Yes. Licensees are encouraged to share information about the current security authorization of employees who are departing to work for another licensee, not only for access to radioactive material but also for access to sensitive information. This sharing of information can spare all licensees from having to conduct unnecessary additional background investigations. The receiving licensee will still need to document the basis for its own determination of whether to approve access.

However, the regulations in 10 CFR Part 37 do not require the sharing of access authorization information. Such background information can be shared only on a voluntary basis by mutual consent. Assuming that the existing background investigation is not older than 10 years, the licensee will not need to conduct a new reinvestigation.

Q6: What measures are required for adequate information protection?

A6: Licensees must develop, maintain, and implement written policies and procedures to ensure that only trustworthy and reliable individuals with a need to know are allowed access to security plans and procedures. See 10 CFR 37.43(d)(2). These policies and procedures must ensure the proper handling and protection of security plans and implementing procedures to protect against unauthorized disclosure. The licensee's policies and procedures should do the following:

- Include a general performance requirement that each person who produces, receives, or acquires the licensee's sensitive information ensures that such information is protected against unauthorized disclosure.
- Address ways to protect sensitive information while in use, storage, and transit.
- Address the preparation, identification or marking, and transmission of documents or correspondence containing the licensee's security program information.
- Address ways to control access to the licensee's security program information.
- Include methods for the destruction of documents that contain security program information.
- Include procedures for the use of information systems that contain security program information.
- Address the removal of documents from the licensee's protected information category when they become obsolete or no longer sensitive.

§ 37.43, "General Security Program Requirements" (continued)

§ 37.43(d), "Protection of Information" (continued)

§ 37.43(d)(4)

Licensees need not subject the following individuals to the background investigation elements for protection of information:

§ 37.43(d)(4)(i)

The categories of individuals listed in § 37.29(a)(1) through (13); or

§ 37.43(d)(4)(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)(7), has been provided by the security service provider.

§ 37.43(d)(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, implementing procedures, or the list of individuals that have been approved for unescorted access.

§ 37.43(d)(6)

Licensees shall maintain a list of persons currently approved for access to the security plan, implementing procedures, or the list of individuals that have been approved for unescorted access. When a licensee determines that a person no longer needs access to the security plan, implementing procedures, or the list of individuals that have been approved for unescorted access, or no longer meets the access authorization requirements for access to the information, the licensee shall remove the person from the approved list as soon as possible, but no later than 7 working days, and take prompt measures to ensure that the individual is unable to obtain the security plan, implementing procedures, or the list of individuals that have been approved for unescorted access.

§ 37.43(d)(7)

When not in use, the licensee shall store its security plan, implementing procedures, and the list of individuals that have been approved for unescorted access in a manner to prevent unauthorized access. Information stored in nonremovable electronic form must be password protected.

§ 37.43(d)(8)

The licensee shall retain as a record for 3 years after the document is no longer needed:

§ 37.43(d)(8)(i)

A copy of the information protection procedures; and

§ 37.43(d)(8)(ii)

The list of individuals approved for access to the security plan, implementing procedures, or the list of individuals that have been approved for unescorted access.

EXPLANATION:

This section lists the classes of individuals who are exempt from licensee background investigations for the protection of security information. The licensee must store security plans and implementing procedures to prevent unauthorized access and must password-protect information stored in nonremovable electronic form.

Information protection procedures and the list of individuals approved for access to the security plan or implementing procedures must be kept as records for 3 years. Licensees that possess information to be protected under 10 CFR 37.43(d) or 10 CFR 37.77(f) must protect it in accordance with 10 CFR 37.43(d).

Q&As:

Q1: Is anyone relieved from the background investigation elements?

A1: Yes. The same categories of individuals who have been relieved from the background investigation elements for unescorted access to the radioactive material are also relieved from the background investigation elements for access to security information. See also the Q&As on 10 CFR 37.29. Under 10 CFR 37.29(a), these categories include the following:

- an employee of the Commission or the Executive Branch of the U.S. Government who has undergone fingerprinting for a prior U.S. Government criminal history records check
- members of Congress
- an employee of a member of Congress or a congressional committee who has undergone a prior U.S. Government criminal history records check
- the Governor of a State or his or her designated State employee representative
- Federal, State, or local law enforcement personnel
- State radiation control program directors and State homeland security advisors or their designated State employee representatives

- Agreement State employees who conduct security inspections on behalf of the NRC in accordance with an agreement executed under Section 274.i of the AEA
- representatives of the IAEA engaged in activities associated with the U.S./IAEA Safeguards Agreement who have been certified by the NRC
- emergency response personnel who are responding to an emergency
- commercial vehicle drivers for road shipments of Category 1 and Category 2 quantities of radioactive material
- package handlers at transportation facilities, such as freight terminals and railroad yards
- any individual who has an active Federal security clearance
- any employee of a service provider licensee for whom the service provider licensee has conducted the background investigation and has approved the individual for unescorted access to Category 1 or Category 2 quantities of radioactive material

Q2: How should a licensee protect sensitive information while in use, storage, and transit?

A2: The licensee should store the information in a locked cabinet, desk, or office. The licensee must password-protect information stored in nonremovable electronic form. Licensees must address how employees should protect sensitive information while this information is in their possession, both at and away from work. Access to the keys, combinations, passwords, or other means used to secure the information needs to be limited to those persons with authorized access to the information. Additional information on the protection of sensitive security-related information appears in NRC RIS 2005-31, Revision 1, "Control of Security-Related Sensitive Unclassified Nonsafeguards Information Handled by Individuals, Firms, and Entities Subject to NRC Regulation of the Use of Source, Byproduct, and Special Nuclear Material," dated December 26, 2017 (ADAMS Accession No. ML16196A237).

Q3: Do licensees need to protect their physical license to possess Category 1 and Category 2 radioactive material as sensitive information?

A3: Although not required by 10 CFR Part 37, as explained in NRC RIS 2005-31, Revision 1, licensees should protect the license as sensitive information because it contains information that identifies specific authorization types, activities, and locations of use which, if disclosed, could inhibit the security of the licensed material. Documents that contain security-related sensitive information should be protected from public disclosure through the use of methods similar to those for protecting proprietary information.

Q4: How should a licensee prepare, identify, mark, and transmit documents or correspondence containing the licensee's security program information?

A4: A good practice is to prepare and mark licensee-generated security program information in a way that ensures easy identification and proper handling. The front and back of folders that contain such information also should be marked for easy identification and proper handling.

Documents that do not, in themselves, contain security program information but are used to transmit one or more documents containing this information should be marked to indicate that security program information appears in the documents transmitted. See NRC RIS 2005-31, Revision 1.

Q5: What methods should a licensee use to destroy documents containing security program information?

A5: Documents must be destroyed in a manner that makes them unreadable, indecipherable, and irrecoverable, for example, by burning, pulping, pulverizing, shredding, or chemical decomposition. Similar methods may be used for film and microform media ("microform" is the generic term for any material on film or paper, such as a microfiche that contains a smaller reproduction of a document for transmission, storage, reading, and printing). Electronic media, such as tapes, floppy discs, compact discs, digital video discs, and thumb drives, may be destroyed by shredding, smashing, burning, or chemical decomposition, and data on hard drives and servers should be erased, or the drives reformatted, before they are submitted for recycling. Regardless of the storage medium, the licensee should not send security program information for recycling without it being destroyed first. See also Guidance for destruction in NIST SP 800–53," Security and Privacy Controls for Federal Information Systems and Organizations,"and NIST SP 800–88, "Guidelines for Media Sanitization."

Q6: What methods should a licensee use to protect security information when using an information system to store security program information?

A6: Licensees may keep the list of individuals approved for unescorted access, the security plan, and the implementing procedures, electronically. A licensee may use a variety of methods to protect files on a computer or other digital system. For example, the licensee may use encryption techniques or place the documents on a restricted drive. Another method that the licensee may use is to password-protect individual documents. Whatever method it uses, the licensee should describe the method in its information protection procedures. The documents must be kept for 3 years after they are superseded or replaced, therefore, previous versions of the plan should not be overwritten.

Q7: When should a licensee remove documents from the licensee's protected information category if they become obsolete or no longer sensitive?

A7: A licensee may remove documents from its protected information category when it no longer needs to have a security plan and procedures (i.e., when it no longer needs to possess an aggregated Category 2 or greater quantity of radioactive materials). Until that time, all the information in the licensee's security plan or procedures is unlikely to become obsolete or no longer sensitive. Neither the plan nor the procedures may be relieved from 10 CFR Part 37 information protection requirements if they retain any sensitive information, and even the original versions of the plan and procedures are likely to retain some sensitive information until the licensee no longer needs to protect a Category 2 or greater quantity of material.

Q8: What documents do I need to retain under this section? How long must I keep the documents?

A8: The licensee must keep a copy of the procedures on information protection. It also must keep a copy of the list of individuals approved to have access to the security information. These

records must be kept for 3 years after the record is no longer needed or until the NRC terminates the license as required by 10 CFR 37.103.

Q9: Will licensees need to handle SGI?

A9: Some licensees may be required to handle SGI or SGI-M. Licensees should review 10 CFR 73.21(a)(1)(i) and (ii) to determine if they have this type of information.

Q10: Would an engineer designing the security systems for a blood irradiator room need to undergo a background investigation to have unescorted access to the irradiator room when it contains radioactive material?

A10: Yes. If the engineer is allowed unescorted access to the security zone containing the irradiator, he or she would be subject to the access authorization program in Subpart B of 10 CFR Part 37 and would need to undergo a background investigation. If the irradiator room is situated such that the engineer will not need to enter the security zone or will be escorted while in the security zone, he or she would not be subject to Subpart B.

If the engineer needs access to protected security information, 10 CFR 37.43(d)(4)(ii) permits a licensee to accept written verification from a security service provider stating that the provider has conducted the background investigation required in 10 CFR 37.25(a)(2)–(7) and has determined its employee to be trustworthy and reliable. This would permit the security service provider's employee to have access to the protected information.

Q11: I have an employee who needs to know some components of my security plan to perform her job. Does she need to undergo a background check to have access to parts of my security plan?

A11: Yes. An insider with even a limited knowledge of the security plan or its implementing procedures may be able to use this knowledge or convey it to others for malevolent purposes. For example, a security guard with access only to an alarm-response schematic or an information technology specialist with access only to a communication system for security personnel could significantly compromise the security of radioactive material against theft, sabotage, or diversion. An individual with a "need to know" the information that has already been approved for unescorted access to Category 1 or Category 2 quantities of radioactive material would not need a reinvestigation for access to the information since a background investigation to determine the individual's trustworthiness and reliability has already been completed.

Q12: Can a licensee maintain one list of individuals who have access to the security plan and implementing procedures and a separate list of individuals who have been approved for unescorted access to material?

A12: Yes. A licensee can determine that it is more advantageous to its operations to maintain two lists: one list of individuals who have access to protected information (i.e., the security plan, implementing procedures, and list of individuals approved for unescorted access), and another list of individuals who have been approved for unescorted access to radioactive materials. This process may support a licensee's efforts to identify individuals who are provided access to information (i.e., the security plan, implementing procedures, and list of individuals approved for unescorted access) and those who have been approved for unescorted access to radioactive

materials. Some individuals may be on both lists. If all the individuals who are granted access to the protected information have also been approved for unescorted access to material, licensees may prefer to create and maintain one list.

§ 37.45, "LLEA Coordination"

§ 37.45(a)

A licensee subject to this subpart shall 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:

§ 37.45(a)(1)

A description of the facilities and the category 1 and category 2 quantities of radioactive materials along with a description of the licensee's security measures that have been implemented to comply with this subpart; and

§ 37.45(a)(2)

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.

EXPLANATION:

Licensees must coordinate, to the extent practicable, with an LLEA for responding to threats to the licensee's facility, including any necessary armed response. The licensee must provide a description of its facilities, radioactive materials, and security measures. The licensee must also state that it will request a timely armed response by the LLEA to any actual or attempted theft, sabotage, or diversion.

Q&As:

Q1: What kinds of LLEA coordination activities are required?

A1: The coordination activities could involve meetings, telephone conferences, plant tours, training in radiation protection, tabletop exercises, and other communications to provide information. As discussed in more detail in the subsequent Q&As for this section, the licensee must notify the LLEA that it will request an armed response to any actual or attempted theft, sabotage, or diversion of radioactive material, as well as to suspicious activities noted by the licensee. The licensee must also provide information about the facility, its radioactive materials, and the licensee's current security measures. To facilitate a timely, coordinated, and effective response to a security incident, the licensee should verify site and LLEA contact information.

Q2: Can a licensee take credit for requirements such as 10 CFR 73.55(k)(8)(iii) to document and maintain current agreements with applicable law enforcement agencies to include estimated response times and capabilities to meet the LLEA coordination and notification requirements in 10 CFR 37.45(a)?

A2: If a licensee already coordinates with the LLEA for other types of material (e.g., special nuclear material) to meet other Commission requirements, the licensee does not need to coordinate separately with its LLEA, but should include information regarding Category 1 and Category 2 material as part of its LLEA coordination to meet the LLEA coordination and notification requirements in 10 CFR 37.45(a).

Q3: What is the purpose of the LLEA coordination?

A3: A timely and effective response to a security incident is part of an effective physical protection system. 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 give the responsible LLEA an understanding of the potential consequences associated with malevolent use of the radioactive material so that the LLEA can determine the appropriate priority of its response. The LLEA response would be necessary not only to potentially interdict and disrupt an attempted theft or sabotage of the radioactive material but also for possible offsite coordination to protect public health and safety and to mitigate the potential consequences of a theft, sabotage, or diversion of radioactive material.

Q4: Many different kinds of agencies are responsible for providing security, including private security guard forces on the campuses of universities, hospitals, and other institutions. What kinds of law enforcement organizations should a licensee seek to coordinate with?

A4: The LLEA will need to be authorized by a Government entity to make arrests and to have the capability to provide an armed response. However, the LLEA does not need to be a municipal or a county police force. If a city or county hospital or State university campus police force is the law enforcement agency nearest to the licensee's operation and capable of providing an armed response and making arrests, that police force would meet the definition of an LLEA.

A licensee also will need to consider if the LLEA could provide the needed armed response at all times, day or night, 7 days a week. Some LLEAs are on duty only during specified hours; in such cases, the licensee will 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.

Q5: Can an onsite proprietary professional security force with trained and armed officers be considered an LLEA?

A5: No. A private security force cannot be considered an LLEA unless it meets the criteria for an LLEA as defined in 10 CFR 37.5. An onsite armed force may provide the initial licensee response, but the licensee must still coordinate with an offsite LLEA unless the onsite force is also authorized by a Government agency to bear arms and make arrests. The offsite LLEA should still be notified of incidents immediately to provide additional help if necessary and to enable the LLEA to assess the potential for offsite impacts and the need to notify other agencies.

Q6: If I have a written agreement with a third-party service that provides off-duty local law enforcement agents on site at all times, would that be acceptable to demonstrate compliance with the LLEA coordination requirement?

A6: Even if the individual off-duty police officers working for the third-party security service are authorized to carry firearms, to make arrests, and to provide an armed response to a security incident at a licensee's facility, the company itself would not qualify as an LLEA because it must be approved *as an agency* by a Federal, State, or local government to carry out these duties. Thus, an agreement with such a third party to provide security for the licensee's site is not, in itself, sufficient to demonstrate compliance with the coordination requirement. The licensee would still need to coordinate with an LLEA to request its assistance for either onsite or offsite support or both in the event of an attempted or actual theft, sabotage, or diversion. For example, the licensee would, among other activities, still need to coordinate with the LLEA under 10 CFR 37.45(d) at least every 12 months or when changes to its facility design or operation could change how the LLEA may need to respond to the facility. The licensee may also want to consider whether and how the service provider's off-duty police officers could coordinate with their respective offsite LLEA employers if a security incident occurs at the licensee's site.

Q7: What kinds of information should a licensee provide to an LLEA for effective coordination?

A7: The information should include the important aspects of a licensee's physical protection program and other factors that would help the LLEA to appropriately prioritize and respond to an alarm or other request by the licensee for response. In accordance with 10 CFR 37.45(a)(1) and (a)(2), at a minimum, the licensee is required to provide the following information to the LLEA:

- a description of the facility
- types and quantities of devices and radioactive material possessed
- site-specific physical protection measures that the licensee uses to delay an adversary in gaining access to the radioactive material
- a 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

Licensees may also discuss other relevant information with the LLEA to further ensure a robust and effective response. Possible relevant topics include the following:

- potential hazards associated with loss of control of the devices and radioactive material
- specific facility information (e.g., contact information, floor plans, entrances, points of egress)
- established protocol that the licensee will use to contact the LLEA in response to an event
- licensee and LLEA points of contact for plans to recover stolen material that has been removed to an offsite location

Licensees should also consider providing the LLEA with the contact information for their State radiation control authority, particularly if the LLEA cannot contact the licensee during an event.

This information is available through the Directory of Agreement State and Non-Agreement State Directors and State Liaison Officers on the NRC's public Web site at https://scp.nrc.gov/asdirectory.html.

Q8: Does the NRC require a licensee's security staff to have firearms?

A8: The rule does not require a licensee's security staff to be armed, nor does it prohibit licensees from arming their security staff. The licensee must comply with applicable State and local law.

Q9: What does the NRC mean by coordinating with an LLEA "to the extent practicable"?

A9: The NRC recognizes that some LLEAs may be reluctant to engage in coordination activities with a licensee, and the agency added "to the extent practicable" to avoid putting licensees into noncompliance for actions that they cannot reasonably be expected to control. This phrase allows a licensee to remain in compliance with the rule when an LLEA will not participate in any coordination activities. The licensee can comply with this requirement simply by documenting, in accordance with 10 CFR 37.45(c), that it has initiated contact and has periodically contacted the LLEA during the required timeframe, has provided information about its security needs and its intent to request an armed response, and has asked to coordinate a response to a security incident involving a Category 2 or greater quantity of radioactive materials.

Q10: What should a licensee request as an adequate LLEA response to a threat to a licensee's facility? For example, would a single officer with radio backup be sufficient, or is an entire SWAT team necessary?

A10: The LLEA will decide what is adequate and will respond as appropriate to the event based on the agency's understanding of the situation and its potential consequences. One of the purposes of establishing liaison with the LLEA is to give it an understanding of the potential consequences associated with the malevolent use of the radioactive materials subject to this rule so that the LLEA can appropriately determine the priority of its response. The LLEA response is necessary for offsite coordination to protect the public health and safety and to mitigate the potential consequences of the malevolent use of radioactive material.

Q11: Can LLEAs have access to the licensee's physical protection information?

A11: The licensee is *required* to give an affected LLEA some physical protection information. The regulation in 10 CFR 37.45(a)(1) requires the licensee to provide "a description of its facilities and the Category 1 and Category 2 quantities of radioactive materials along with a description of its security measures that have been implemented to comply with this subpart."

Q12: What are the LLEA's responsibilities for protecting this sensitive information?

A12: LLEAs are not subject to NRC information protection requirements; however, they may be subject to other information protection requirements under State or local law. Under 10 CFR 37.29(a)(5), State, local, and other law enforcement authorities are members of occupational groups deemed to be trustworthy and reliable by virtue of their employment status, and these authorities protect sensitive law enforcement information routinely in the course of their operations.

Q13: Would it be appropriate for a licensee to give a diagram of its facility to an LLEA?

A13: Depending on the size of the licensee's facility and the location of the at-risk material, providing a facility plan to the LLEA may be appropriate. The purpose of coordination is to give the LLEA the information that it deems necessary to do its job in responding to potential malevolent acts that involve lost, stolen, or missing radioactive material from the licensee's facility.

Q14: If a licensee is required to have an emergency plan under 10 CFR 30.32(i), can the licensee satisfy any of the requirements of 10 CFR 37.45 for LLEA coordination by complying with the emergency planning requirements of 10 CFR 30.32(i)(3)(xii)?

A14: Yes. The licensee can comply with the emergency planning requirements in 10 CFR 30.32(i)(3)(xii) to satisfy the requirements in 10 CFR 37.45 for LLEA coordination as long as its emergency plan specifically calls for LLEA coordination. The regulation in 10 CFR 30.32(i)(3)(xii) states, among other things, that an emergency plan under this section must include "provisions for conducting quarterly communications checks with offsite response organizations…to test response to simulated emergencies." The quarterly communications checks must include "the check and update of all necessary telephone numbers." Thus, if a licensee possesses at least a Category 2 quantity of radioactive material and has an emergency plan that complies with 10 CFR 30.32(i) and if the plan specifies the nearest LLEA or LLEAs as "offsite response organizations" with which the licensee conducts quarterly communications checks, the licensee may cite the plan as one component of its demonstration of compliance with the general requirement under 10 CFR 37.45(a) to "coordinate, to the extent practicable, with an LLEA for responding to threats to the licensee's facility." These quarterly checks could also enable the licensee to demonstrate compliance with the requirement in 10 CFR 37.45(a)(2) for "[a] notification that the licensee will request a timely armed response by the LLEA to any actual or attempted theft, sabotage, or diversion," and compliance with the requirement in 10 CFR 37.45(d) to "coordinate with the LLEA at least every 12 months."

Depending on the kinds of information in the emergency plan, it may also enable the licensee to comply with the requirement in 10 CFR 37.45(a)(1) to provide to the LLEA "a description of the facilities and the Category 1 and Category 2 quantities of radioactive materials along with a description of the licensee's security measures that have been implemented to comply with this subpart." However, the plan itself would not enable the affected licensee to comply with the notification requirements in 10 CFR 37.45(b), the documentation requirements in 10 CFR 37.45(c), or the requirement in 10 CFR 37.45(d) to coordinate with the LLEA "when changes to the facility design or operation adversely affect the potential vulnerability of the licensee's material."

Q15: Is there some method for an LLEA to become informed about radioactive materials and the licensee's possession of such materials, including those in devices?

A15: Yes. The Federal Government, through the U.S. Department of Homeland Security (DHS), is actively working with LLEA organizations to improve their awareness and response capabilities across a wide variety of threats by providing information, training, and funds. LLEAs can obtain additional information about training from the National Domestic Preparedness Consortium at https://www.ndpc.us/index.html, the local FBI Field Office Weapons of Mass Destruction Coordinator at https://www.fbi.gov/contact-us/field, and the DHS National Network

of Fusion Centers at https://www.dhs.gov/state-and-major-urban-area-fusion-centers. Licensees can also invite the LLEA to attend their annual health and safety and security training sessions.

In coordination efforts with the LLEA, the licensee's information should add to and help reinforce the LLEA's knowledge of radioactive materials and the potential risks associated with both their legitimate and malevolent uses.

Q16: Do I have to conduct response exercises with my LLEA or otherwise train my LLEA?

A16: No. The licensee is not required to offer training to the LLEA. Exercising the response portion of the licensee's security plan is a good practice, but it is not required. Some LLEAs may not be willing or able to participate, and the NRC also recognizes that requiring all licensees to exercise their response plans may not be cost effective for small licensees with less complex security plans.

Q17: What are the LLEA coordination requirements for work at a temporary jobsite?

A17: The rule does not require a licensee to coordinate with an LLEA for work at temporary jobsites. However, licensees are not precluded from coordinating with the LLEA as an extra margin of security for extended periodes of work at a temporary jobsite.

§ 37.45, "LLEA Coordination" (continued)

§ 37.45(b)

The licensee shall notify the appropriate NRC regional office listed in § 30.6(b)(2) of this chapter within 3 business days if:

§ 37.45(b)(1)

The LLEA has not responded to the request for coordination within 60 days of the coordination request; or

§ 37.45(b)(2)

The LLEA notifies the licensee that the LLEA does not plan to participate in coordination activities.

EXPLANATION:

The licensee must notify the appropriate NRC regional office within 3 business days if the LLEA has not responded to its request for coordination within 60 days or if the LLEA notifies the licensee that it does not plan to participate in coordination activities.

Q&As:

Q1: Would an LLEA's decision not to coordinate put a licensee into noncompliance with these coordination requirements?

A1: No. The NRC recognizes that it cannot exercise authority over LLEAs or any party over which a licensee has no control and over which the NRC has no legal jurisdiction. The NRC also recognizes that an LLEA may have good reasons, including resource limitations and the possibility of other coinciding incidents within its jurisdiction, for not engaging in coordination activities with a licensee.

Q2: What happens when an LLEA declines to coordinate with a licensee?

A2: A licensee must notify the NRC whenever an LLEA with jurisdiction over the licensee's facilities declines to engage in coordination activities. The licensee must document its efforts to coordinate with the LLEA and keep the record of documentation for 3 years in accordance with 10 CFR 37.45(c).

Q3: To trigger the requirement to notify the NRC, must a licensee have a written or oral statement from an LLEA stating that it does not plan to participate in coordination activities?

A3: No. Because the rule requires the licensee to notify the NRC if the LLEA has not responded within 60 days to a licensee's request for coordination, a licensee does not need to have an official statement from the LLEA that it does not plan to participate. The LLEA's actions can demonstrate that the LLEA does not plan to coordinate with the licensee.

Q4: How should a licensee notify the NRC regional office to meet 10 CFR 37.45(b) requirements?

A4: The licensee may notify the NRC regional office by letter, facsimile, e-mail, or telephone. The regulation in 10 CFR 30.6, "Communications," provides contact information. If the licensee contacts the NRC by telephone, it should document the conversation so that it will have a record of the notification.

Q5: Some State or local jurisdictions may have a requirement that the initial response to any emergency involving radioactive materials must be provided by other than armed LLEA personnel, such as hazmat responders. How do I know whether such a requirement affects my LLEA's response to a security incident?

A5: The licensee should ask the LLEA. A convenient time to ask could be during one of the licensee's required interactions with the LLEA to develop or maintain effective coordination of responses to a security incident. If such a State or local requirement exists, the licensee should notify the designated first responder organization about the nature of its emergency response needs during a security incident so that unarmed and unsuspecting responders are not needlessly put in harm's way. The licensee may also ask the hazmat or other designated first responder to coordinate with the LLEA to develop an agreed-upon response protocol that would allow the licensee to contact the LLEA first for a response to a security incident involving its radioactive materials.

§ 37.45, "LLEA Coordination" (continued)

§ 37.45(c)

The licensee shall document its efforts to coordinate with the LLEA. The documentation must be kept for 3 years.

EXPLANATION:

This text is self-explanatory.

Q&As:

Q1: Besides the documentation of meetings and correspondence, what other information on LLEA coordination activities should a licensee document?

A1: The licensee should document the dates, times, and locations of meetings and a list of licensee and LLEA staff members present at the meetings. The licensee should also document any written agreement or prearranged response plan with an LLEA if the LLEA is willing to enter into such an agreement or plan.

Q2: If an LLEA has decided not to participate in coordination activities, how should a licensee document that it has made a good faith effort to coordinate with that LLEA? Must a licensee send all correspondence to such an LLEA by certified mail, UPS, or other third-party delivery method to produce a verifiable record?

A2: No. Using certified mail, UPS, or another third-party delivery method to document the licensee's transmittal of a coordination request would be an acceptable way to comply with the requirement; however, the licensee does not need to use such methods if it keeps a copy of the dated letter, e-mail, or other correspondence and maintains records of calls to the LLEA.

Q3: Must a licensee maintain paper records of its LLEA coordination activities and correspondence? What about e-mails and other electronic communications, including digitized images, and documents generated on a computer?

A3: No. The licensee does not need to maintain records in paper form. As long as the record is legible and retrievable, the licensee can keep a reproduced copy, microform copy, or electronic copy. The regulation in 10 CFR 37.45(c) requires licensees to maintain records of LLEA coordination activities for a period of 3 years.

§ 37.45, "LLEA Coordination" (continued)

§ 37.45(d)

The licensee shall coordinate with the LLEA at least every 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.

EXPLANATION:

The licensee must coordinate with the LLEA every 12 months.

Q&As:

Q1: When should I coordinate with the LLEA concerning changes to my facility's design or operation?

A1: The licensee should notify the LLEA as soon as possible after making any changes to the facility design or operation that could affect the LLEA's response to an incident. If possible, the licensee should notify the LLEA before making such changes. In addition, a good practice is to afford LLEA response personnel the opportunity to familiarize themselves with the facility once any design or operating changes have been made.

Q2: I understand that I must coordinate with the LLEA at least every 12 months even if there are no significant changes to my facility's design or operation. What topics or issues should I cover when I contact the LLEA in one of these 12-month coordination activities?

A2: The coordination may include, but should not be limited to, a discussion of any recent security developments since the licensee's last coordination meeting and the potential consequences of any planned or potential changes in either its facilities or operations or the LLEA's capabilities or policies. Thus, the licensee should be prepared to review any security events or trends over the preceding 12 months that could have involved the LLEA and to review any security events or trends for which the licensee has taken or plans to take corrective action. The licensee should also be prepared to discuss any changes in its facility's existing or planned security measures, policies, notification procedures, equipment, or other resources that could affect the LLEA's response or ability to respond to an actual or attempted theft, sabotage, or diversion of radioactive materials at the licensee's facilities over the upcoming 12 months. An example of such a change would be a revision of the licensee's security plan or procedures; a new monitoring, alarm, or communication system; or a decision to procure security services from a commercial contractor.

The licensee should also discuss any changes in its LLEA point-of-contact information either at its facility or at the LLEA. In addition, depending on the licensee's and the LLEA's available time and resources, the licensee could offer the LLEA a tour of its facility or an opportunity to participate in planned drills or tabletop exercises or both activities.

Q3: Must I convene a face-to-face meeting for 12-month coordination?

A3: No. Although a face-to-face meeting with LLEA officials would be desirable, the NRC understands that competing demands on the LLEA's time may make such meetings difficult to arrange.

Q4: Who should participate in these coordination activities?

A4: At a minimum, participants on the licensee's side should include the individual who has operating responsibility for implementation of the security plan or his or her designee and the individual whom the licensee identified to the LLEA as its point of contact for coordination activities, if the two responsibilities are not assigned to the same person. If the participants need a prompt decision from an individual at a higher level of licensee management, that individual should attend. Depending on current demands for LLEA assistance, getting the desired LLEA representative to attend may be difficult; however, for consistency, the licensee should try to ensure that at least the designated LLEA point of contact, if there is one, participates.

Q5: Does a licensee have to coordinate with LLEA every 12 months if the LLEA has not responded to the request for coordination within 60 days of the coordination request or the LLEA notifies the licensee that they do not plan to participate in coordination activities?

A5: Yes, a licensee does have to coordinate with LLEA every 12 months if the LLEA indicates they do not plan to participate in coordinating activities. The licensee must document its efforts to coordinate with the LLEA and keep the record of documentation for 3 years in accordance with 10 CFR 37.45(c).

§ 37.47, "Security Zones"

§ 37.47(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.

EXPLANATION:

All aggregated Category 1 and Category 2 quantities of radioactive material must be used or stored within licensee-established permanent or temporary security zones.

Q&As:

Q1: How do I determine whether I possess an aggregated Category 1 or Category 2 quantity of radioactive material?

A1: The sum-of-fractions method, also known as the unity rule, is used to determine if the licensee possesses a Category 1 or Category 2 quantity of radioactive material. A licensee may need to implement 10 CFR Part 37 requirements even if it does not possess any single source or single radionuclide in excess of a Category 2 threshold. For examples of unity rule calculations, see Q1 and A1 under the definitions of Category 1 and Category 2 quantities in the section discussing 10 CFR 37.5 of Subpart A.

Q2: What is a security zone, and what is its purpose?

A2: A security zone is an area, defined by the licensee, that both isolates and controls access to Category 1 or Category 2 quantities of radioactive material. The purpose of the zone is to define the area that contains the quantities of material that must be protected, and within which the licensee will apply the isolation and access control measures required by 10 CFR Part 37. The licensee must use or store all Category 1 and Category 2 quantities of radioactive material only within a security zone.

Q3: Can I use an area established for radiation safety to meet the requirements for a security zone? Can they be the same?

A3: Depending on the licensee's safety and security needs, the boundaries of these two types of areas may differ or may be identical. Because the purpose of the security zones is different from the radiation safety purposes of the restricted areas and controlled areas defined in 10 CFR 20.1003, the security zone does not have to be the same as either of these areas; however, it may be the same.

Since measures to control access are required for both radiation protection and security, a licensee does have the flexibility to use an area required for radiation protection purposes to fulfill the required functions of a security zone. The intent of 10 CFR 37.47 is to allow licensees flexibility in establishing access control and isolation in a manner that would allow reliance on existing systems and procedures, which are already in use for radiation protection, for physical

security. For example, consider a temporary well-logging operation for which the regulations in 10 CFR 39.71, "Security," require the licensee to have a "restricted area" to "maintain direct surveillance…to prevent unauthorized entry." 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." In this case, the restricted area required for radiation protection may also provide security from exposure to this radiation.

Similarly, a radiographer could choose to define a security zone with the same boundaries as the "high radiation area" over which the regulations in 10 CFR 34.51, "Surveillance," require radiography licensees to "maintain direct visual surveillance…to protect against unauthorized entry."

Q4: How does the NRC define a "temporary" security zone?

A4: The NRC defines a temporary security zone as an area established by the licensee to provide physical protection for a Category 1 or Category 2 quantity of radioactive materials for a specified, limited expected time, which may be several minutes to several months, to accomplish a specified task.

Q5: How does a permanent security zone differ from a temporary one?

A5: A permanent security zone uses permanent barriers to provide isolation and to aid in controlling access to the material. These barriers may consist of fences, gates, free-standing walls for exterior areas, exterior or interior building walls, doors, locked windows, bars, or grillwork. The barriers or walls control access to the security zone through established access control points, deter and delay penetration by an unauthorized person or unauthorized people, and aid detection by providing an indication of forced penetration.

Temporary security zones do not need to have permanent barriers at their boundaries; however, licensees can use permanent barriers if they are available at the location of the work. The licensee may use other devices that warn passersby of the restricted nature of an area to provide isolation of the material and the people using the material in a temporary security zone. The licensee can also control access through surveillance of the material, persons, and area by an authorized individual.

§ 37.47, "Security Zones" (continued)

§ 37.47(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.

EXPLANATION:

Licensees must establish temporary security zones as necessary for time-limited or intermittent business activities, such as source maintenance, delivery, and replacement.

Q&As:

Q1: When should I establish a temporary security zone?

A1: The licensee should establish a temporary security zone whenever it has a periodic or unplanned short-term operating requirement for the use or storage of a Category 1 or Category 2 quantity of radioactive material outside of a permanent security zone. Examples of such a requirement could include a need to repair, maintain, or calibrate a radioactive source or a device that contains a source at a location where the licensee does not routinely use or store the source or device. The licensee should also establish a temporary security zone when it takes delivery of a source or device outside of its established permanent security zone.

Additionally, work at a temporary jobsite will require the establishment of a temporary security zone at the jobsite.

Q2: How do I establish a temporary security zone?

A2: Although the licensee may be able to use permanent barriers if such barriers are available at the site, it may establish a security zone simply by keeping the area under direct supervision and control by an approved individual or individuals.

Q3: May I station someone who is not an approved individual outside a temporary security zone with a radio or other means of communication to notify people inside the zone about an impending intrusion?

A3: The rule does not prevent the licensee from using an unapproved individual to provide additional continuous direct surveillance; however, the regulation in 10 CFR 37.47(c)(2) does not allow the licensee to rely on any individual who has not been approved for unescorted access to be a monitor of access to a temporary or permanent security zone unless an approved individual monitors the unapproved individual. Allowing an individual who has not been determined trustworthy and reliable under this part to monitor a security zone without surveillance by an approved individual could provide an opportunity for insiders to compromise the security of the material.

Q4: How large should a temporary security zone be?

A4: The rule does not specify the size of a security zone. Locations are configured differently 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. The licensee will determine its physical dimensions on an individual basis, and these dimensions can change based on operating status and security needs. The security zone may be as small as a locked cabinet or as large as a warehouse area.

Q5: If I routinely work in a large plant facility and move frequently from one location to another within the same facility, do I have to establish a different temporary security zone for each location, or can I consider the whole facility to be a temporary security zone that encompasses all my onsite work locations?

A5: Only the licensee can decide the proper size of the temporary security zone, because only the licensee knows the conditions at the site and the requirements of its work. However, in making its decision, the licensee will need to consider the basic performance requirements for establishing a security zone. (See 10 CFR 37.47(c).) The regulation in 10 CFR 37.47(c) requires the licensee to isolate the subject radioactive materials to allow unescorted access only to approved individuals, using either direct control of the security zone by approved individuals at all times, continuous physical barriers that allow access to the security zone only through established access control points, or a combination of continuous physical barriers and direct control. For example, if the facility is small enough to provide continuous physical barriers that allow access only through an established access control point that the licensee controls, it may be able to consider the entire facility a temporary security zone. For those spaces in which the licensee will be using its source or device between access-controlled permanent zones, its temporary security zone does not need to be any larger than the space in which it needs to control access.

Q6: How do I meet 10 CFR Part 37 requirements for controlling unescorted access to a temporary security zone if I'm at a temporary jobsite that doesn't have such continuous physical barriers as lockable doors?

A6: When work needs to be done inside a temporary security zone that does not have physical barriers or special equipment, a licensee could meet the requirements for controlling unescorted access by having the material, persons, and area within the zone under the direct control of approved individuals at all times.

Q7: When would a temporary security zone have to be considered permanent?

A7: The rule does not specify a time limit by which a temporary security zone must become permanent; however, 10 CFR 37.47(b) does define a temporary security zone as "necessary to meet the licensee's transitory or intermittent business activities, such as periods of maintenance, source delivery, and source replacement." Most licensees will probably have a business interest in maintaining temporary security zones for only a limited time because the cost of isolating radioactive material behind permanent physical barriers is likely to be cheaper than the labor cost of maintaining continuous direct surveillance.

§ 37.47, "Security Zones" (continued)

§ 37.47(c)

Security zones must, at a minimum, allow unescorted access only to approved individuals through:

§ 37.47(c)(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. A physical barrier is a natural or man-made structure or formation sufficient for the isolation of the category 1 or category 2 quantities of radioactive material within a security zone; or

§ 37.47(c)(2)

Direct control of the security zone by approved individuals at all times; or

§ 37.47(c)(3)

A combination of continuous physical barriers and direct control.

EXPLANATION:

Security zones must allow unescorted access only to approved individuals by either isolating the radioactive materials with continuous physical barriers that allow access only through established control points, by controlling the security zone directly by approved individuals at all times, or by using a combination of physical barriers and direct control.

Q&As:

Q1: Why is a security zone important? What is required of licensees with respect to a security zone?

A1: The security zone is the area within which licensees must use and store Category 1 and Category 2 materials. It isolates and controls access to the materials to prevent and detect unauthorized access. Licensees cannot use or store Category 1 or 2 material outside security zones.

Q2: For the purposes of 10 CFR Part 37, what is an "approved individual"?

A2: As defined in 10 CFR 37.5, an approved individual is an individual whom the licensee has determined to be trustworthy and reliable in accordance with Subpart B of 10 CFR Part 37 and who has completed the training required by 10 CFR 37.43(c).

Q3: For the purposes of 10 CFR Part 37, what is a "continuous physical barrier"?

A3: A continuous barrier must limit access to the security zone only through one or more established access control points. The continuous barrier should have no openings other than access control points, including windows, large enough to allow a person to enter the security zone and bypass the access control point. For example, a wall should be continuous from the floor to the structural ceiling, and openings (such as vents) that are equal to or greater than 96 square inches, whereby the smallest dimension is equal to or greater than 6 inches, should have metal grates, bars, expanded metal (an industry term for a screen made of steel or similarly strong metal through which an observer can see activities inside or outside an enclosure), or some other barrier that cannot be removed from outside the security zone. Refer to NUREG-2166 for additional guidance concerning continuous physical barriers.

Q4: For the purposes of 10 CFR Part 37, what is "isolation"?

A4: To isolate is to separate or set apart. In the context of 10 CFR Part 37, it refers to the effect of putting materials in a defined area—the security zone—separated by barriers from other areas in order to control access to the materials.

Q5: If I need to use locks, what controls are required to limit access to the keys to my facilities?

A5: The licensee must limit access to the keys to locks for security zones and Category 1 or Category 2 quantity of radioactive materials or devices within those zones solely to those individuals who must have access to perform their assigned tasks and who have been determined trustworthy and reliable in accordance with Subpart B. However, a better security practice is to avoid relying on keys to control access to the security zone. Key control becomes more difficult as time passes (especially for large institutions) as more duplicate keys are made for newly approved individuals. The same is true for the control of lock combinations over time. Key cards, cipher locks, or some other type of electronic access control device should be used where feasible instead of keyed or combination locks. Additionally, each approved individual should have a unique access code. With these devices, the licensee can delete the access code after an individual no longer requires access to the security zone or when a key card is lost or stolen.

Q6: Does 10 CFR Part 37 require that locks for different rooms be rekeyed to different keys or combinations?

A6: No. However, different keys or lock combinations for different rooms would improve security by making it more difficult for an adversary to aggregate radioactive material into a Category 1 or Category 2 quantity of radioactive material. The licensee must determine how it will control access to the facility.

Q7: Shouldn't the features of a device containing a Category 1 or Category 2 quantity of radioactive material be given credit for providing some isolation for purposes of access control?

A7: No. The NRC wrote the requirements for 10 CFR Part 37 with full awareness of the features of devices that licensees commonly use and the quantities of licensed material these devices typically contain. The devices are designed to limit access to the sources for radiation protection purposes, whereas the regulations in 10 CFR Part 37 also require the control of access to devices that contain the radioactive material. The requirements were designed to provide a defense-in-depth strategy for the protection of radioactive material in Category 1 or

Category 2 quantities of radioactive material. No single control can provide the same level of protection as the combination of controls required by 10 CFR Part 37.

Q8: Self-contained irradiators have shown themselves to be very safe for daily use without operators having access to the radioactive material. Controlling access to this material is generally much easier than controlling access to the irradiator itself. Are the 10 CFR Part 37 requirements expected to address access to the radioactive material or to the irradiator?

A8: Both. To address potential misuse with malevolent intent, the NRC designed the requirements for 10 CFR Part 37 to control access to both the radioactive material and the irradiator by controlling access to the security zone. The NRC has engaged the experts at national laboratories that have shown that these devices may be vulnerable to theft, sabotage, or diversion under certain scenarios. For this reason and because of the possibility that a trained insider could assist in malevolent acts, the NRC has determined that certain additional security measures are necessary in the current threat environment. The regulations in 10 CFR Part 37 require a layered, defense-in-depth approach to enhance the security of radioactive material in Category 1 and Category 2 quantities. No single measure can provide the required security for this material; therefore, a licensee must implement all applicable 10 CFR Part 37 requirements unless the licensee requests, and the NRC approves, an exemption.

Q9: Can the requirements for controlling access be waived if compliance is overly burdensome?

A9: A licensee may seek, and the NRC may grant, an exemption from any NRC requirement on a case-by-case basis; however, the NRC is unlikely to grant relief from an access control requirement simply because the licensee considers it burdensome.

Q10: What if a licensee's truck carrying a Category 1 or Category 2 quantity of radioactive material breaks down and must be towed to a shop for repairs, and the repair shop doesn't allow licensee personnel into the repair bay to keep the onboard security zone under continuous surveillance?

A10: The licensee must still meet the applicable requirements of 10 CFR Part 37 to ensure that the sources and their shielding devices are not removed. In this case, an approved individual could lock the truck, remain at the shop, and keep the truck in sight to control and maintain constant surveillance of licensed material. Alternatively, the licensee could remove the device and maintain control of the material until the truck is repaired or until the source(s) can be returned to a licensed facility.

Q11: Can the requirements of 10 CFR 37.53 for independent physical barriers for mobile sources be used to control access and prevent an unescorted individual from entering a room where a radioactive source is located?

A11: No. The intent of 10 CFR 37.53 is not to achieve total access control but to provide additional delay in removing a mobile device from the facility, temporary jobsite, or vehicle. For mobile devices, delay barriers are required *in addition to* the access controls required by 10 CFR 37.47. Without the additional barriers, a portable or mobile device could more easily be stolen, sabotaged, or diverted.

Q12: If I have a room with a conventional door lock and entry alarms, what else do I need for an effective security zone?

A12: To protect against unauthorized access to, and removal of, material behind conventional door locks with entry alarms, the licensee may need to consider additional means, such as guards, closed-circuit television, or motion detectors. The specific system and the means to protect material is left to the licensee's discretion; however, to meet 10 CFR Part 37 requirements, the licensee should consider reasonably foreseeable actions by adversaries and the methods that they could use to gain unauthorized access. For example, walls should be continuous from floor to ceiling. Vents and other openings equal to or greater than 96 square inches, whereby the smallest dimension is greater than 6 inches, should have metal grates, expanded metal, bars, or some other barrier that cannot be removed from outside the security zone. For additional technical guidance on the capabilities and applications of different access control system technologies, the licensee may refer to NUREG-1964, "Access Control Systems: Technical Information for NRC Licensees," issued April 2011, and NUREG-2166.

Q13: For facilities that may store radioactive materials or devices, such as dosimetry calibrators, outside a protected area (PA), what constitutes an adequate physical barrier? Would an unlocked concrete container be adequate, for example, if it could not be opened without the use of a mobile crane?

A13: The adequacy of a barrier around a storage area would depend on site-specific factors that the licensee should consider. For example, these factors should include the configuration of the storage area and whether it abuts and uses the perimeter fence at the site boundary; the proximity of the radioactive materials to the fence and their vulnerability to theft or diversion; and the proximity of other means of access, such as vehicles, cranes, ladders, or other tools that could readily be used to defeat the barrier.

In assessing the adequacy of any physical barrier, the licensee should consider, as generally good practice, its contribution to an integrated security system designed to provide defense in depth through effective detection, assessment, and response to a security event without delay. The licensee is responsible for ensuring that any barrier will perform as designed to enable the security zone as a system to meet the performance objective of isolating the material and allowing access only through established access control points under 10 CFR 37.47(c)(1). The licensee may also want to consider whether a barrier could delay intruders sufficiently to contribute to the overall security program's ability to meet its performance objective of detecting, assessing, and responding to an actual or attempted unauthorized access "without delay" under 10 CFR 37.41(b).

Q14: How do I meet 10 CFR Part 37 requirements for controlling unescorted access to a temporary security zone if I'm at a temporary jobsite that doesn't have physical barriers or special equipment, such as lockable doors?

A14: A licensee could meet the requirements for a temporary security zone simply by keeping the area under ''direct supervision'' by authorized personnel while the device or radioactive material is in use. For mobile or portable devices containing radioactive material, see the additional requirements in 10 CFR 37.53.

§ 37.47, "Security Zones" (continued)

§ 37.47(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 sufficient individuals approved for unescorted access 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.

EXPLANATION:

Licensees must provide sufficient individuals approved for unescorted access to maintain continuous surveillance of Category 1 quantity sources when physical barriers or intrusion detection systems (IDS) have been disabled.

Q&As:

Q1: When are special additional measures for Category 1 quantities of radioactive material required?

A1: During equipment maintenance or source receipt, installation, replacement, or preparation for shipping, tamper-indicating devices and other intrusion detection equipment typically must be disabled to permit the device to be opened without tripping alarms. After replacement, the removed sources must be prepared on site for shipment back to the manufacturer or for storage and eventual disposal. These nonroutine operations during a time when devices for detecting theft or diversion are disabled require additional measures to compensate for the temporary increase in vulnerability.

Q2: Does the approved individual who must perform the continuous surveillance of the source replacement or maintenance work have to remain on duty for the duration of the work?

A2: No. An approved individual must perform the continuous surveillance; however, he or she does not need to be the same individual for the duration of the work. If the original approved individual who is observing the work must be relieved, the second observer must begin surveillance before the original observer departs.

§ 37.47, "Security Zones" (continued)

§ 37.47(e)

Individuals not approved for unescorted access to category 1 or category 2 quantities of radioactive material must be escorted by an approved individual when in a security zone.

EXPLANATION:

An approved individual must escort an individual who has not been approved for unescorted access when he or she is in a security zone.

Q&As:

Q1: What is an escort's responsibility?

A1: The objective of escorting is to maintain effective control of access to protected radioactive material, including access by unapproved individuals who require access to a security zone to perform their duties. The escort must maintain continuous surveillance of the escorted individual(s) and must carry out assigned responsibilities for detection, assessment, and response as required. The purpose of the escort is to ensure that escorted individuals perform their duties as intended and do not misuse their access to the protected radioactive materials. Procedures for escorts should be tailored to each facility's operations. Licensees should consider limiting the number of people assigned to an escort to avoid degrading the escort's effectiveness in completing other assigned safety and security responsibilities.

Q2: Do licensees have to visually distinguish (e.g., with badges) all individuals who have not been granted unescorted access?

A2: No. This is not a requirement; however, licensees should consider methods for distinguishing individuals approved for unescorted access from those requiring escort. For example, those individuals approved for unescorted access to Category 2 or greater quantities of radioactive material could wear colored badges or other identifying articles. Colored badges or identification cards may be appropriate for a larger organization, whereas simple face recognition may be appropriate in a smaller one. The ability to visually distinguish approved individuals from those who require escort is considered a best security practice, although other ways to distinguish these individuals may be available, such as by electronically coded badges. In any case, the method used to distinguish individuals who require escort should help facility personnel in the early detection and timely assessment of unauthorized access incidents.

Q3: Can we assume that patients can be granted unescorted access during treatments?

A3: No. Patients who are being treated with devices containing Category 1 or Category 2 quantities of radioactive material must be escorted. The escort does not need to be physically with the patient in the treatment room; however, he or she can observe from outside the room. The licensee should restrict patients' access to loaded teletherapy devices during their treatment with these devices, and the licensee must comply with 10 CFR Part 37 requirements. The licensee should not permit patients access to areas in which radioactive material is stored unless the patients are escorted by approved individuals.

Q4: Must an escort always maintain line-of-sight surveillance of an unapproved individual in a security zone?

A4: No. However, the escort must maintain "direct continuous visual surveillance," which he or she may conduct using video surveillance in some but not all cases. For example, video surveillance of patients during a treatment is appropriate; however, video surveillance in which the escort is in another building would not be appropriate.

Q5: Must the escort always be physically present when an individual who is not approved for unescorted access is in the security zone?

A5: Generally, yes. However, an escort may monitor an unapproved individual remotely (e.g., using a closed-circuit TV system or a window into the room) as long as the escort maintains continuous visual surveillance over the individual at all times. Under some circumstances (e.g., when a patient undergoes teletherapy), remote surveillance might be preferable to the actual physical accompaniment of an unapproved individual.

Q6: How can a single individual, such as a medical technologist assigned to be an escort, maintain "direct control" of the security zone sufficiently to prevent an incident or even raise an alarm in the event that someone is armed and intent upon gaining access to radioactive material?

A6: An absolutely assured method to prevent a determined, well-conceived, and well-equipped effort to gain unauthorized access to radioactive material does not exist. The purpose of the escort is to identify, assess, and respond if possible to the unauthorized activities by a visitor or another individual who has not been granted unescorted access. The escort should also observe behavior that may suggest an interest in defeating the security system. For example, the escort should notice if the visitor shows an unusual interest in the system, equipment, and procedures used to protect the security zone.

§ 37.49, "Monitoring, Detection, and Assessment"

§ 37.49(a), "Monitoring and Detection"

§ 37.49(a)(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.

EXPLANATION:

Licensees must continuously monitor and detect without delay all unauthorized entries into security zones. The licensee must maintain a continuous monitoring and detection capability whenever the primary power source is lost, or the licensee must provide for an alarm and response when the capability to continuously monitor and detect unauthorized entries is lost.

Q&As:

Q1: Is there a need to provide security monitoring for locations other than windows, doors, and access ways?

A1: Yes. The detection system must be able to detect all reasonably foreseeable unauthorized access to the security zone, including breaches of barriers used to isolate and control access to the protected radioactive material. This capability may require security monitoring beyond that installed on windows, doors, and designated access points.

Q2: If a licensee opts to provide an alarm system for a loss of the primary power source for monitoring and detection systems, must the system be calibrated to alarm for power surges, brownouts, or other anomalies in the electricity supply system? What would constitute a "loss" of the primary power source? What other sources of information can I use for monitoring and detection methods and equipment?

A2: The licensee should calibrate an alarm system for a power source impairment to trip for power surges, brownouts, and other anomalies that would cause a loss of the monitoring or detection system's functionality. A licensee should consider a "loss" of its primary power source to be any anomaly that impairs the ability of a monitoring or detection system to perform as expected. If the licensee chooses instead to use an alternate or auxiliary power source, such as a gasoline-fueled generator, the alternate power source should be set to power the monitoring and detection system automatically.

Q3: What other sources of information can I use for monitoring and detection methods and equipment?

A3: For additional technical information on the capabilities and applications of different backup power intrusion detection technologies, the licensee may refer to NUREG-1959,

Revision 1, “Intrusion Detection Systems and Subsystems: Technical Information for NRC Licensees,” issued September 2017. For technical information on the capabilities and applications of various access control systems, the licensee may refer to NUREG-2166 and NUREG-1964.

§ 37.49, "Monitoring, Detection, and Assessment" (continued)

§ 37.49(a)(2)

Monitoring and detection must be performed by:

§ 37.49(a)(2)(i)

A monitored intrusion detection system that is linked to an onsite or offsite central monitoring facility; or

§ 37.49(a)(2)(ii)

Electronic devices for intrusion detection alarms that will alert nearby facility personnel; or

§ 37.49(a)(2)(iii)

A monitored video surveillance system; or

§ 37.49(a)(2)(iv)

Direct visual surveillance by approved individuals located within the security zone; or

§ 37.49(a)(2)(v).

Direct visual surveillance by a licensee designated individual located outside the security zone.

EXPLANATION:

The licensee must perform monitoring and detection by either a monitored IDS linked to a central monitoring facility, electronic intrusion detection alarms that will alert nearby facility personnel, a monitored video surveillance system, or direct visual surveillance.

Q&As:

Q1: Would implementation of an area monitor connected to a silent alarm, key card access to the area, and a video monitoring system be adequate for meeting 10 CFR Part 37 requirements?

A1: The regulation was designed to allow licensees flexibility to choose methods that work best in each licensee's specific circumstances; therefore, the adequacy of a system will depend on the system's capabilities and site-specific requirements. It is the licensee's responsibility to choose monitoring and detection methods and technologies for effective compliance with the requirements of this section. The licensee can accomplish effective detection and monitoring in different ways tailored to different facility-specific operating conditions. The licensee's choices must ensure that it has dependable means in place to transmit information between and among the various components used to detect and identify an unauthorized intrusion, to inform the licensee security staff, and to summon the appropriate responder.

Q2: May I use a less sensitive monitoring system during the routine workday? May I rely on visual inspection by approved individuals during the normal workday and a system depending on an offsite monitoring facility at night?

A2: The licensee can meet detection and monitoring requirements by using electronic devices, visual monitoring, or a combination of these methods. However, the chosen method(s) must be effective in providing the required capability of immediate detection, assessment, and response. Personnel must be trustworthy and reliable, trained in appropriate security procedures, equipped for reliable communications, and capable of meeting the immediate detection requirements. Electronic devices must be capable of alerting trained onsite or offsite facility personnel upon first detection of an intrusion. Visual monitoring must also be capable of alerting trained assessment and response personnel without delay. For additional technical guidance on the capabilities and applications of different IDS technologies, the licensee may refer to NUREG-1959 or NUREG-2166.

Q3: If a licensee uses electronic intrusion detection alarms, what are the minimum performance capabilities required of these devices?

A3: To meet the requirements of 10 CFR 37.49(a)(2)(ii), a licensee must use intrusion detection alarms that will alert nearby facility personnel to unauthorized access to the security zone. These alarms may be visual (e.g., strobe lights); however, if the licensee relies on audible alarms to fulfill this function, the sound of these alarms should be distinguishable from other alarms and should be audible above ambient background noise level at the farthest location of a responder. If the licensee decides to use magnetic switches on doors and windows as part of an intrusion alarm system, the NRC considers the use of balanced magnetic switches a best practice because these switches are more difficult for an adversary to defeat. If the licensee uses motion detectors, it should use enough detectors to cover all potential entrance and egress points for radioactive material from the security zone. To meet the intent of 10 CFR 37.49(a), the detection system must be capable of detecting reasonably foreseeable unauthorized access to the security zone, including breaches of barriers used to isolate and control access to the protected radioactive material. The licensee's security plan should explain how any method used to alert facility personnel will be reliable and effective in permitting immediate detection on a continuous basis. For additional technical guidance on the capabilities and applications of different IDS technologies, the licensee may refer to NUREG-1959 or NUREG-2166.

Q4: May I use silent alarms, as some experts recommend, for duress situations?

A4: The licensee may use silent alarms to meet the requirement in 10 CFR 37.49(a)(2)(i) for a monitored IDS linked to an onsite or offsite central monitoring facility. The licensee may deploy silent alarms in the immediate vicinity of the security zone in addition to the intrusion detection alarms to respond to situations in which anyone threatens or assaults another approved individual once inside the security zone. Silent alarms for such duress situations can give responders the advantage of surprise and can provide additional time to assess and more effectively intervene. However, if the licensee does choose silent alarms to comply with 10 CFR 37.49(a)(2)(ii), it must continuously monitor them by direct visual surveillance or a monitored video or audio surveillance system connected to a central monitoring station.

§ 37.49, "Monitoring, Detection, and Assessment" (continued)

§ 37.49(a)(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:

§ 37.49(a)(3)(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:

§ 37.49(a)(3)(i)(A)

Electronic sensors linked to an alarm; or

§ 37.49(a)(3)(i)(B)

Continuous monitored video surveillance; or

§ 37.49(a)(3)(i)(C)

Direct visual surveillance.

§ 37.49(a)(3)(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.

EXPLANATION:

Licensees with Category 1 quantities of material must provide immediate detection capability through electronic sensors linked to an alarm, continuous monitored video surveillance, or direct visual surveillance. Licensees with Category 2 quantities must ensure that the material is present through use, tamper-indicating devices, physical checks, or other means.

Q&As:

Q1: What does the NRC mean by the requirement in 10 CFR 37.49(a)(3)(i) that my detection capability be "immediate"?

A1: The common dictionary meaning of "immediate" is "at once, instant, without any intervening time." Thus, the licensee's detection system must be capable of alerting it to any attempted unauthorized removal of radioactive material from the security zone instantly and without delay.

Q2: To meet the additional requirement of 10 CFR 37.49(a)(3)(i) for immediate detection of an attempted removal of a Category 1 quantity of material from a security zone, can a licensee rely only on its main sitewide IDS linked to a monitoring facility?

A2: No. This requirement is in addition to the requirement to detect, assess, and respond to unauthorized access to the security zone. Methods that the licensee may use to meet the requirement to detect removal include, but are not limited to, the following:

- an alarming, electronic, tamper-indicating device
- radiation detectors that will alarm when the material is removed from a security zone
- continuous visual surveillance by an approved individual

If a licensee uses electronic tamper-indicating alarms, the alarm should be capable of alarming either when an attempt is made to remove a Category 1 quantity of radioactive material from a device or when an attempt is made to remove the device itself. Licensees should protect tamper-indicating alarms from being manipulated or deactivated by unauthorized individuals by controlling access to control switches or equipment. The tamper-indicating alarms should be armed at all times, except during periods of maintenance.

If a licensee decides to use alarms that will alert nearby facility personnel to unauthorized access to the security zone, the audible alarm should be distinguishable from other alarms and should be above ambient background noise level at the farthest location of a responder. The licensee's security plan should explain how any method used to detect unauthorized removal will be reliable and effective in providing immediate detection on a continuous basis.

Q3: Where should the means of detection be placed to meet the requirement to immediately detect attempted unauthorized removal of Category 1 material?

A3: To meet the requirement to detect any attempted unauthorized removal, detection should generally take place within the security zone, not on the outside of the doorway to the security zone. For an alarming, tamper-indicating device, this would require placement of a sensor inside the security zone. For a radiation detector, the means of detection could be outside the security zone if it is sensitive enough to detect radiation from its position. For continuous visual surveillance, either direct or by video feed, the surveillance would require observation of the sources or the device containing them, not observation of the security zone entrance.

The means of detection, including sensors, controls, and communication lines should be placed so as not to be vulnerable to manipulation or disruption. The communication lines must meet 10 CFR 37.49(c)(2) requirements by providing 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.

Q4: Would licensees with continuous staffing on site, 24 hours a day, 7 days a week still be required to implement 10 CFR Part 37 requirements for immediate detection of a removal?

A4: Licensees will still be required to implement 10 CFR Part 37 requirements; however, they may be able to take credit for staffing 24 hours a day, 7 days a week, to meet some of these requirements. The licensee can consider having staff members who can identify anyone without a clear work-related duty to be near a protected device and who will immediately call for assistance when needed as part of its response to the unauthorized removal of radioactive material.

Q5: May I use approved individuals to monitor for unauthorized removals of Category 1 material if these individuals are moving about constantly and may not always be watching the area under access controls?

A5: The licensee may use a variety of methods to detect an unauthorized removal; however, the method that it selects must meet the 10 CFR Part 37 requirements to respond immediately to any actual or attempted theft, sabotage, or diversion of protected radioactive material. Thus, if the licensee relies on approved individuals to detect removal immediately, as required by 10 CFR 37.49(a)(3)(i), at least one individual must be observing at all times, unless another approved individual is escorting an unapproved individual in the affected security zone. However, no one method of monitoring may be right for all licensees.

Q6: Would periodic checking by a trained security guard meet the requirement for "immediate detection" of an actual or attempted removal of a Category 1 quantity? Why would 15 minutes not permit an adequate response to an alarm?

A6: As noted earlier, "immediate" is commonly defined as "instant" or "without delay." Although trained individuals can be used to monitor and immediately detect, assess, and respond as required, periodic checks, even those at intervals shorter than 15 minutes, will not meet the immediate detection requirement. Immediate detection is essential to reduce the risk that an adversary will be able to remove the material even if he or she is able to gain unauthorized access to it. Immediate detection is also essential to enhance the likelihood of recovering the material before it can be misused or to mitigate the consequences of misuse even if the adversary is able to remove it from its authorized location.

Q7: Is there any way to monitor without an alarm system?

A7: Trained individuals may be used to fulfill some requirements in 10 CFR Part 37; however, to comply with the requirement in 10 CFR 37.49(a)(1) to "maintain the capability to continuously monitor and detect without delay all unauthorized entries into…security zones," a licensee must maintain this capability 24 hours a day, 7 days a week. An appropriate method of monitoring, detection, and assessment should also provide a dependable means to transmit information between the various components used to detect an unauthorized intrusion, to inform security staff, and to summon the appropriate responder. An integrated alarm system may be the most cost-effective method to provide such continuous compliance.

Q8: May I use radiation safety monitoring and detection systems for material security purposes?

A8: Yes. The licensee may use these systems if their use does not adversely affect radiation safety. To comply with this part, the licensee may use, for example, any monitored motion detection systems or alarms used to control access to high-radiation areas or other alerting systems used for radiation protection. The licensee may also modify these systems but

only if the modifications do not compromise the equipment's original safety purpose. For example, the licensee should not relocate an integrated motion detection and alarm system originally installed at one location for radiation safety purposes to serve a security zone if the relocation would diminish the system's sensitivity at its original location. Radiation detection alarms would generally not enable the licensee to detect intrusions as required by 10 CFR 37.49(a)(2)(ii); however, the licensee may use these alarms to comply with the requirement in 10 CFR 37.49(a)(3)(i) to detect the unauthorized removal of radioactive material from a security zone. The licensee's security plan should describe how any radiation safety systems used for security purposes will provide the required intrusion or removal detection without impairing these systems' performance or functionality for radiation protection (e.g., a radiation monitor placed outside of a treatment room door and used to send a security alarm signal for immediate detection of the removal of a Category 1 quantity of radioactive material from the security zone).

Q9: Can a partial exemption from 10 CFR 37.49 be granted to licensees at extremely remote locations, such as offshore and wilderness sites, where access is limited and communication difficult?

A9: Any licensee may request an exemption from any NRC requirement; however, a licensee seeking an exemption from immediate detection requirements solely on the basis of remoteness would need to address the potential security risks of such relief. Remoteness may allow an intruder to gain undetected and unauthorized access more readily than in more populated environments. An additional lag in communications about an unauthorized removal may also provide advantages to an intruder's planning to steal or sabotage material. Licensees must therefore meet all applicable 10 CFR Part 37 requirements unless the NRC approves an exemption request. If a licensee does request an exemption from a 10 CFR Part 37 requirement because of remoteness or the difficulty of timely communication, the licensee must justify the request and should propose compensatory measures to mitigate the consequences of not meeting the specified requirement. The NRC will evaluate exemption requests on a case-by-case basis. See the Q&As for 10 CFR 37.11, "Specific Exemptions."

Q10: Could radiation detection equipment connected to a silent alarm be used to alert local law enforcement of an attempted theft of radioactive material?

A10: Yes. Depending on the configuration of shielding surrounding the radioactive source and other factors, radiation meters could be a means to detect and alert an LLEA to an attempted theft of radioactive material. However, a licensee would be prudent to avoid overreliance on any single method for detecting an unauthorized removal of radioactive material. The NRC intends that the requirements for 10 CFR Part 37 provide a defense-in-depth strategy, and the NRC expects licensees to consider all credible scenarios when developing and implementing a security program to implement the requirements in 10 CFR Part 37.

Q11: If a licensee with a Category 2 quantity of radioactive material does not use the material weekly or make weekly physical checks to verify its continuing presence, what "other means" may this licensee use to detect the removal of a Category 2 quantity of radioactive material under 10 CFR 37.49(a)(3)(ii)?

A11: The intent of the provision for "other means" to detect the removal of a Category 2 quantity of material is to give the licensee flexibility to use the method that works best for its

facility. Although electronic sensors for detecting the removal of a Category 2 quantity of material are not required, the licensee should consider, as good practice, the application of these devices to Category 2 quantities, where feasible, for immediate detection capability. For additional technical guidance on the capabilities and applications of different IDS technologies, the licensee may refer to NUREG-1959 or NUREG-2166.

If a licensee decides to use an electronic tamper-indicating device for detecting the removal of a Category 2 quantity of material, the NRC recommends that the system be designed to silently or audibly alarm on any attempt to remove a device or a source from its device. The licensee should arm the tamper-indicating alarm at all times, other than during equipment maintenance or calibration. The licensee's security plan should also explain how any method used to detect the unauthorized removal of a Category 2 quantity of material will be reliable and effective in meeting the requirements in 10 CFR 37.49(a)(3).

Q12: Does the weekly verification that Category 2 material is present require verification that the radioactive source and not just the device is present?

A12: The requirement is "to ensure that the radioactive material is present." This means that the licensee cannot rely on a simple visual check that the device is present but must instead determine that the source is within the device. For example, the licensee may conduct ambient exposure rate surveys of the device (e.g., radiography cameras), use a radiation dosimetry indicator for irradiators (quality assurance for the dose delivered to the product), or use tamper-indication alarms or seals as a means of verifying that the radioactive material is present.

§ 37.49, "Monitoring, Detection, and Assessment" (continued)

§ 37.49(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.

EXPLANATION:

A licensee must assess each actual or attempted unauthorized entry into a security zone immediately to determine if there was an actual or attempted theft, sabotage, or diversion.

Q&As:

Q1: Can a licensee use automated devices to assess an intrusion and alert an LLEA?

A1: Yes. The licensee can use these devices if it is able to meet the requirements in 10 CFR Part 37. Assessment may be made by either automated devices or trained personnel who can initiate the appropriate response; however, in either case, the assessment must enable the licensee to request assistance and to begin any other mitigating measures immediately.

Depending on the security system, the layout of security zones, and the design capabilities of the sensors, automated devices or systems may be programmed to summon LLEA assistance automatically in response to an intrusion alarm. The security plan and implementing procedures must describe how the licensee would assess and respond to unauthorized access. In developing its plan and procedures, the licensee should consider the possibility of simultaneous alarms at multiple locations.

Q2: Can licensees perform their own vulnerability assessment and change 10 CFR Part 37 time requirements for detection and response?

A2: Licensees are welcome to conduct vulnerability assessments as a good practice; however, they may not change the rule's time requirements for detection and response unilaterally. The regulations in 10 CFR Part 37 require licensees to detect, assess, and respond to any reasonably foreseeable unauthorized access to the security zone "without delay," and the LLEA must be notified as soon as possible. If, for some reason, a licensee cannot comply with a specific requirement or if the licensee believes that the requirement is counterproductive, it should inform the NRC and request an exemption. The exemption request should propose compensatory measures to mitigate the consequences of not meeting the specified requirement.

Q3: Must I summon LLEA assistance in response to *any* intrusion alarm?

A3: No. The licensee must assess the situation immediately to determine if the alarm signals an actual or attempted intrusion and must decide if the intrusion justifies LLEA involvement. In certain instances, the licensee may determine in advance that an alarm from an electronic tamper-indicating device calls for an automatic summons to the LLEA; however, not

summoning an LLEA for every unauthorized intrusion would be good practice since such intrusions could be either unknowing or inadvertent, and it would be counterproductive to request LLEA assistance automatically for such insignificant security events as an inadvertent activation of an alarm. Frequent alerts to the licensee's LLEA(s) are likely to result in a delayed or inadequate response to a real security incident and can, depending on the LLEA policies, result in fines.

§ 37.49, "Monitoring, Detection, and Assessment" (continued)

§ 37.49(c), "Personnel Communications and Data Transmission"

For personnel and automated or electronic systems supporting the licensee's monitoring, detection, and assessment systems, licensees shall:

§ 37.49(c)(1)

Maintain continuous capability for personnel communication and electronic data transmission and processing among site security systems; and

§ 37.49(c)(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.

EXPLANATION:

Licensees must maintain continuous capability for personnel communication and electronic data transmission and processing among site security systems. Licensees must also provide alternative personnel communication and data transmission and processing capabilities in case the primary means is lost. Alternative systems may not have the same failure modes as primary systems.

Q&As:

Q1: What do I have to do to "maintain continuous capability" under 10 CFR 37.49(c)(1)??

A1: The licensee must have a dependable means to transmit information to all the various components involved in the detection and assessment of an intrusion, including the appropriate responder, 24 hours a day, 7 days a week. The licensee may use landline telephones, automatic dialers, cellular phones, pagers, radios, and other similar modes of communication to fulfill this requirement. When using more than one person for detection and assessment, the licensee must also provide a means for the various monitoring personnel to communicate with each other.

Q2: What personnel communications and data transmission systems are subject to the requirement for an alternative capability?

A2: The licensee must have an alternative capability for any primary system of communication or data transmission and processing that it relies on to meet requirements. The alternative means must be able to provide continuous communication or data transmission capability. The licensee could use landline phones, automatic dialers, cellular phones, pagers, radios, and other similar modes of communication to fulfill this requirement as long as they are not subject to the same failure mode as the primary systems that they must replace. For

example, a radio or cellular phone could be considered as a backup to a landline phone. However, an alternative cell phone system may not rely on the same cell tower and transmission system as the primary cell phone system.

Q3: To comply with the requirement that the alternative communication system not be subject to the same failure mode, may a licensee use a different cell phone service as a backup to a primary cell phone service?

A3: No, unless the licensee can show that the alternative cell phone service does not use the same satellite communications system, signal processing, or receiving tower as the primary service.

§ 37.49, "Monitoring, Detection, and Assessment" (continued)

§ 37.49(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.

EXPLANATION:

Licensees must respond immediately to any actual or attempted theft, sabotage, or diversion of Category 1 or Category 2 quantities of radioactive material or unauthorized access to the security zones at licensee facilities or temporary jobsites. The licensee must request an armed LLEA response without delay.

Q&As:

Q1: What should I do if I detect an intrusion into a security zone?

A1: The licensee's response would depend on its assessment of the purpose of the intrusion; however, a response is required without delay. If the licensee assesses that the intrusion is an actual or attempted theft, sabotage, or diversion of Category 1 or Category 2 quantities of radioactive material, it must notify and request an armed response from the appropriate LLEA immediately, followed soon after by a call to the NRC Operations Center at 301-816-5100. An immediate response by the licensee would permit a more timely response from law enforcement, thereby reducing the consequences of the incident.

The licensee's decision to call the LLEA and the NRC would depend not only on its assessment of the intent of the unauthorized access but also on whether the area in which the breach occurred is an area that it had previously determined needed monitoring to meet the NRC's physical protection requirements. Thus, the 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 material storage area if the two areas are not adjacent.

Q2: Could radiation detection meters connected to a silent alarm be used to alert local law enforcement of an attempted theft of radioactive material?

A2: Yes. The licensee could use radiation meters as part of a system to alert an affected LLEA to an actual or attempted theft of radioactive material if this method is acceptable to the LLEA. The rule is designed to provide a defense-in-depth strategy for radioactive material security, and the NRC expects licensees to consider other measures for requesting LLEA assistance if such assistance would also be necessary.

Q3: Since licensed facilities are also broken into to obtain equipment items other than radioactive materials, must licensees summon the LLEA every time there is a break-in?

A3: No. The licensee's decision to call the LLEA would depend on what areas, as determined by the licensee, need to be controlled for access to the radioactive material and on the licensee's assessment of the intent of the unauthorized access. A licensee's assessment and response to an intrusion alarm in a conference room or office supply storage area could be entirely different from its assessment and response to an intrusion alarm in a security zone for a radioactive materials storage area.

Q4: Do I have to conduct response exercises with my LLEA?

A4: No. Exercising the response portion of a licensee's security plan is a good practice; however, it is not required. Some LLEAs may not be willing or able to participate, and the NRC also recognizes that requiring all licensees to exercise their response plans may not be cost effective for small licensees with less complex security plans. However, licensees' security programs may benefit from exercising their response plans with their LLEA(s).

§ 37.51, "Maintenance and Testing"

§ 37.51(a)

Each licensee subject to this subpart shall implement a maintenance and testing 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 and are capable of performing their intended function when needed. The equipment relied on to meet the security requirements of this part must be inspected and tested for operability and performance at the manufacturer's suggested frequency. If there is no suggested manufacturer's suggested frequency, the testing must be performed at least annually, not to exceed 12 months.

EXPLANATION:

A licensee must implement a program to ensure that it both maintains and tests its security systems to ensure that they can perform their intended function when needed.

Q&As:

Q1: What minimum measures should a licensee implement for a maintenance and testing program?

A1: A licensee should do the following:

- Identify all alarms, communication systems, and other physical components necessary to secure radioactive materials or to detect unauthorized access to them.
- Specify the intended function of each component identified in the program and the minimum performance required to fulfill that function.
- Specify the test(s) that it will conduct on each component and identify the minimum quantitative or qualitative test results that are required for finding the component operable and capable of performing its intended function.
- Identify the testing equipment that it will use and prescribe any device-specific procedures necessary for the use or maintenance of this equipment.
- Identify the measures that it will apply to ensure that the testing equipment used in the program will perform in service as expected.
- Prescribe procedures for the routine maintenance of each intrusion alarm, communications system, and physical component of both the system used to secure the subject radioactive material and the system used to detect unauthorized access.
- Require a written record for each test and maintenance activity performed on the security or detection system.

Q2: Do I have to inspect and test my facility's security systems every month or every quarter to meet this requirement?

A2: No. The regulation in 10 CFR 37.51(a) requires the licensee to conduct inspection and testing for operability and performance needs at the manufacturer's suggested frequency. If the manufacturer has no suggested frequency, the licensee must perform the testing at least annually, not to exceed 12 months. However, regular daily or weekly use may confirm the operability and performance of some components, such as personnel and data communications systems.

Q3: Must I test and maintain every IDS or other security system on my facility site? If I determine that a detection or security device is unnecessary to meet 10 CFR Part 37 requirements, but still keep it energized, must I keep testing and maintaining it?

A3: No. The licensee is required to test and maintain only those components that it relies on to meet the security requirements of this part for Category 2 or greater quantities of radioactive material. Because the regulation in 10 CFR 37.49(c)(2) also requires the licensee to provide alternative communication capabilities for transmitting personnel and data and for processing in the event of a loss of the primary capability, it must also test and maintain the systems for these alternative communication capabilities.

Q4: What's the difference between maintaining a system or component in operable condition and ensuring that it is capable of performing its intended function when needed? Would licensees have to administer different tests for performance than for operability?

A4: The need for different tests would depend on the intended function of the system or component and on whether that function of the system or component could be fulfilled if the system or component were only in operable condition. For example, the licensee would generally not need to subject a locking deadbolt on a door that isolates radioactive materials to any additional testing as long as it could lock and unlock the door when necessary. However, an intrusion alarm might be considered "in operable condition" if it can be turned on and made to produce an audible sound, but it would not necessarily be "capable of performing its intended function" if it could not reliably detect the movement of an intruder with sufficient sensitivity at a given distance or if it could not produce a sound of sufficient volume to be audible at the nearest work area equipped to assess and respond.

Q5: What kinds of tests for intrusion alarms would be acceptable for demonstrating compliance?

A5: The licensee should refer to the manufacturer's recommended testing protocol, if one is available, for each system or piece of equipment subject to testing and maintenance under 10 CFR 37.51. For additional guidance on testing and maintenance of IDSs and backup power sources, the licensee may also refer to NUREG-1959.

Q6: What should a licensee consider to be an "associated communication system" subject to testing and maintenance? Would a closed-circuit television monitoring system be considered a communication system, even if it's intended primarily for the timely detection of an intrusion?

A6: The NRC considers a communications system to be "associated" if it fulfills any function essential for the operability or performance of the security or detection system as a whole, not

just for the performance of intrusion alarms. For the purposes of this section, the NRC considers a "communication system" to be any device or network of devices used to transmit voice, video, data, or other information from a person or machine at one location to a recipient person or machine at another. This device could include a landline phone, a walkie-talkie system, or a cell phone. A closed-circuit television monitoring system could also be considered a communication system within the meaning of this definition even if the system also performs monitoring or detection functions. An alarm system that incorporates motion-sensing devices could also be considered a communications system even if it also performs monitoring and detection functions. In either case, the testing and maintenance requirements in this section would apply because 10 CFR 37.51 applies to systems for securing radioactive materials and to systems for detecting unauthorized access to these materials. Any system designed to perform multiple functions would be subject to this section as long as one of the system's functions supported either security or detection. For this example, the communication system comprises the lines or cabling that allows transmission of the data from the closed-circuit television cameras to the recipient monitoring station. Such data lines or cabling is also subject to testing and maintenance.

Q7: Specifically, what "other physical components of the system" used for securing or monitoring access to radioactive material would be subject to the requirements for testing and maintenance? Aren't all "components" of these systems inherently "physical"?

A7: To enable licensees to identify physical components of security systems other than alarms and communications systems, the NRC is using the word "physical" to distinguish tangible material components, such as architectural structures and equipment, from system "components" that include human beings and their actions, as well as the plans and procedures that govern those actions. Thus, for a system that secures Category 1 or Category 2 quantities of radioactive material from unauthorized access within a security zone under 10 CFR 37.47(c)(1), any other component should be considered an "other physical component" if it meets the following two criteria:

(1) It is not otherwise integrated into an alarm or communications system, nor is it an employee or contractor performing security-related work at the licensee's site.

(2) Its intended function supports the isolation of these radioactive materials by the use of continuous physical barriers that allow access only through established access control points.

Examples of "other physical components" of security systems thus include walls, doors, remotely operated doors, ceilings, floors, windows, storage containers, shielding, scales, mounting bolts, fasteners, keycard systems, locks, keys, emergency alternate-power generators, and lighting.

Correspondingly, a component of a system used to maintain the capability to continuously monitor and detect, without delay, all unauthorized entries into its security zones under 10 CFR 37.49(a)(1) should be considered an "other physical component" if it meets the following two criteria:

(1) It is not otherwise integrated into an alarm or communications system, nor is it an employee or contractor performing security-related work at the licensee's site.

(2) Its intended function supports the continuous monitoring and immediate detection of all unauthorized entries into the licensee's security zone(s).

Examples of "other physical components" of detection systems include video surveillance cameras and monitors, night-vision devices, motion sensors for self-illuminating floodlights, and tamper-indicating devices that are not otherwise integrated into an alarm or communication system. If a licensee opts to provide an alarm system for a loss of the primary power source for monitoring and detection systems, that system is also an example of an "other physical component" subject to testing and maintenance. If the licensee chooses instead to use an alternate or auxiliary power source, such as a gasoline-fueled generator, that alternate power source would also be subject to testing and maintenance. See Q2 and A2 for 10 CFR 37.49(a)(1) above for inspection and testing frequency. The NRC recognizes that not all physical barriers will need to be "tested" in the sense of the term commonly understood to involve a rigorous, documented administration of specified evaluation procedures under controlled and often nonroutine conditions. The purpose of testing in this regulatory context is to confirm that the subject system component is operable and is capable of performing its intended function when necessary.

The licensee can use various methods to confirm that the subject system component is operable and is capable of performing its intended function when necessary; not all of these methods require the quantitative methods often associated with instrumentation and testing protocols. The operability of some physical barriers, such as keys, keycards, doors, walls, windows, two-way mirrors, and floors, is regularly and satisfactorily confirmed in the course of routine operations. The NRC recognizes that the licensee may not be able to test the performance capability of many physical barrier system components, such as tamper-indicating devices and jersey barriers, as security barriers without risking or resulting in a degradation of their performance. Other barriers, such as the locked entrance to a panoramic irradiator, serve a safety function for which testing could complicate the ALARA principle of radiation safety. In these cases, the NRC does not expect a licensee to test a physical barrier's performance if the test itself could compromise either radiation safety or the future performance of the component or system.

Q8: Must testing and maintenance be performed by approved individuals meeting the access authorization requirements of Subpart B?

A8: No. However, individuals who are not approved for unescorted access will need to be escorted when they are performing maintenance or testing activities within a security zone.

Q9: Will testing equipment need to be secured within a security zone?

A9: No. If the testing equipment is susceptible to tampering by an insider, keeping this equipment within the security zone could be a practical way for some licensees to control unauthorized access to this equipment; however, the NRC recognizes that, for space, operational, and other considerations, storage of security-sensitive testing equipment inside a security zone may not be feasible. In such cases, the licensee should consider other ways to control access to this equipment, such as a locker with a keypad, controlled key, keycard, or combination lock.

Q10: What is required in an acceptable testing and maintenance program for my IDS?

A10: The regulation in 10 CFR 37.51(a) requires the licensee's program to cover the testing and maintenance of all IDSs that it relies on to detect unauthorized access to radioactive material. The program must ensure that these systems and components are maintained in operable condition and are capable of performing their intended function when necessary. To maintain functionality, the licensee must periodically test the IDS and must perform maintenance on malfunctioning components. The NRC considers the testing program acceptable if the IDS operates in a manner consistent with the licensee's physical security plan. The licensee must test the entire IDS or components of the IDS at the frequency specified by the manufacturer or at least annually. The licensee may choose to test the entire IDS or components of the IDS throughout the 12 months of the testing cycle.

§ 37.51, "Maintenance and Testing" (continued)

§ 37.51(b)

The licensee shall maintain records on the maintenance and testing activities for 3 years.

EXPLANATION:

Maintenance and testing records must be kept for 3 years.

Q&As:

Q1: What kinds of records of maintenance and testing activities should a licensee maintain?

A1: For each maintenance activity, a record should identify the following items:

- the name(s) of the person(s) who performed the maintenance
- the date that the maintenance was performed
- the component(s) or system(s) on which the maintenance was performed
- the purpose of the maintenance, identifying, as appropriate, the deficiencies in operability or performance
- any maintenance activities needed to remove any deficiency in the operability or performance of the component or system

For each testing activity, a record should identify the following items:

- the name(s) of the person(s) who performed the testing
- the date of the testing
- the component(s) or system(s) tested
- the purpose of the testing
- the performance expected to fulfill the component's or system's intended function
- the results of the testing
- any maintenance activities needed to remove any deficiency in the operability or performance of the component or system

§ 37.53, "Requirements for Mobile Devices"

§ 37.53

Each licensee that possesses mobile devices containing category 1 or category 2 quantities of radioactive material must:

§ 37.53(a)

Have two independent physical controls that form tangible barriers to secure the material from unauthorized removal when the device is not under direct control and constant surveillance by the licensee; and

EXPLANATION:

Mobile devices containing Category 1 or Category 2 quantities of radioactive material must have two independent tangible barriers to secure the material when the device is not under direct control and constant surveillance.

Q&As:

Q1: What is the performance objective of the requirement for two independent physical controls against the unauthorized removal of radioactive material when it's not under direct control and constant surveillance?

A1: Because mobile devices can often be easily concealed and transported, they are particularly vulnerable to attempted theft or diversion. A mobile device could even be removed before the licensee has an opportunity to respond to an intrusion. Therefore, the objective of this requirement is to delay an attempt to steal the device by making it harder to steal.

Achieving this objective would provide additional time for the licensee to detect, assess, and respond to an attempt by notifying an LLEA if necessary.

Q2: What does the NRC mean by "independent" physical controls?

A2: For purposes of compliance with this requirement, an "independent" physical control does not rely on any other system to deter or delay unauthorized removal of the radioactive material when the mobile device containing it is not under the licensee's direct control and constant surveillance. Such a physical control must provide a barrier against unauthorized removal even if any other barrier or system is disabled.

Three examples of two independent physical controls used for Category 1 or Category 2 quantities of radioactive material in a mobile device at a licensed facility are as follows:

(1) storage of the device inside a locked caged-in storage room within a secured indoor area

(2) storage of the device in a room with a locked door within a secured building for which access is controlled by a separate lock and key or by a security guard

(3) storage of the device inside a locked, nonportable cabinet inside a room with a locked door if the building is not secured

Examples of two independent physical controls used when the licensee secures the radioactive material in or on a transportation vehicle are as follows:

(1) storage of the mobile device in a container that is physically attached to a vehicle with the container secured by two separate chains or steel cables, each of which is locked and separately attached to the vehicle in such a manner that the container cannot be opened without the removal of both of the chains or cables

(2) storage of the device in a container inside a locked trunk, camper shell, van, or other similar enclosure with the container physically secured to the vehicle by a locked chain or steel cable in such a manner that the container could not be opened and the mobile device removed without both breaking into the enclosure on the vehicle and removing the chain or cable

Examples of two independent physical controls used at a temporary jobsite or at a location other than a licensed facility or a licensee's vehicle are as follows:

- storage of the mobile device inside a locked building in a locked nonportable structure
- physically securing the device by a locked chain or steel cable to a locked nonportable structure in such a manner that the device could not be removed without removing the chain or cable
- storage of the device in a locked garage within a locked vehicle
- physically securing the device by a locked chain or steel cable to a disabled vehicle in such a manner that the device could not be removed without removing the chain or cable

Note that a construction trailer, or a sea-land container that has wheels or could easily be placed on a trailer or truck, or a parked and locked truck may not be considered a nonportable structure.

For large mobile devices on wheels that are used inside a facility, a variety of other independent physical controls, including the following, may achieve additional delay:

- speed bumps too large for the device to traverse on the facility floor
- elevated doorway thresholds
- protective storage enclosures
- channels in a floor large enough to catch the device's wheels
- fixed or retractable bollards
- wheel locks, including steering wheel locks (made of hardened material) that require a key or special tool to release

- a hardened chain and lock that cannot be easily cut

However, these additional physical controls for security purposes should not compromise safety. If improperly implemented, some of the suggested controls, such as elevated door thresholds and channels in a floor, may compromise occupational safety. A licensee that intends to use such controls should address these issues.

Q3: Does this section require two physical barriers *in addition to* the physical barrier required for the security zone, or does a barrier for a security zone count as one of the two required barriers?

A3: A barrier for a security zone may count as one of the two required barriers if it is independent of the other barrier and has not been defeated (e.g., for lock replacement or the servicing of a keycard device). Although the two barriers may be of the same type, such as a locked room within a locked room, the barriers have different purposes that contribute to defense-in-depth security. The tangible barriers required by 10 CFR 37.53 are to secure the material from unauthorized *removal* when the device is not under the licensee's direct control and constant surveillance. The security zones required by 10 CFR 37.47 must control unescorted *access*, and licensees may control unescorted access by using continuous physical barriers that allow access to a security zone only through established access control points. A physical barrier for a security zone could control access to radioactive material and secure it from unauthorized removal; however, it must serve both purposes simultaneously and may not rely on any other measures, such as the remote monitoring of the security zone entrance, to fulfill both functions.

Q4: If I have a Category 2 or higher mobile device, are the physical protection requirements in 10 CFR 37.53 the only ones that I am required to implement?

A4: No. Licensees must implement all physical protection requirements in 10 CFR Part 37, Subpart C. The requirements in 10 CFR 37.53 are in addition to the other physical protection requirements in Subpart C.

Q4: If mobile devices are stored in one room, does that mean the licensee has an aggregated quantity of radioactive materials?

A4: The regulation provides that licensees must consider radioactive materials aggregated if:

- Their total quantity at a single location equals or exceeds a Category 2 quantity using the sum-of-fractions method (see the Q&As on the definition of "aggregated" in 10 CFR 37.5); and

- Breaching a common physical security barrier (e.g., a locked door at the entrance to a storage room) would allow access to the radioactive material or devices that contain the radioactive material (see the Q&As on physical barriers in 10 CFR 37.47).

For example, if the licensee stores several mobile devices—each of which is below the Category 2 quantity threshold—in one room without any physical barriers between them, these devices would be considered aggregated if their combined activity equaled or exceeded the Category 2 threshold.

Q5: If I have a Category 1 or 2 quantity of radioactive material in a container that isn't mounted on wheels or casters and can't be carried by hand, and I secure it in a pickup truck bed or on a trailer, would the NRC consider this source or device "mobile"?

A5: Yes. The NRC would consider the source or device mobile because the device would be "mounted on wheels" (i.e., the truck or trailer wheels) and "equipped for moving without a need for disassembly or dismounting" under the definition of "mobile device." A container or device on a pickup truck bed or on a trailer would also subject the truck or tractor to the requirement in 10 CFR 37.53(b) to disable the vehicle when the licensee does not have the container or device under direct control and constant surveillance. See the Q&As on 10 CFR 37.53(b).

Q6: If I have a radiography camera or other mobile device with a Category 1 or 2 quantity of radioactive material, under what conditions would that device meet the exclusion for "stationary equipment installed in a fixed location" under the definition of "mobile device"?

A6: Under this definition, the device would need to be welded, bolted, or otherwise affixed to an immovable piece of equipment, such as an assembly line, or structure, such as a floor, in a manner that would require the disassembly and dismounting of additional equipment before the device could be moved. The device could also be excluded as "stationary equipment installed in a fixed location" if it were chained or cabled to a stationary piece of equipment and secured with a lock; however, the licensee would need to control access to the combination, key, password, or other means of unlocking the lock.

Q7: If I have a Category 2 mobile device, is 10 CFR 37.53 the only requirement in 10 CFR Part 37 that I need to implement?"

A7: No. Licensees are subject to all the other applicable Part 37 requirements.

§ 37.53, "Requirements for Mobile Devices" (continued)

§ 37.53(b)

For devices in or on a vehicle or trailer, unless the health and safety requirements for a site prohibit the disabling of the vehicle, the licensee shall 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.

EXPLANATION:

Vehicles that are being used as secure storage for devices containing at least a Category 2 quantity of radioactive material must be disabled by a means other than removing the ignition key, unless the vehicle is under constant surveillance or other requirements prohibit disabling.

Q&As:

Q1: What are acceptable methods to disable a vehicle or trailer when it is not under direct control and constant surveillance by the licensee?

A1: The objective of the vehicle-disabling requirement is to delay unauthorized removal of a device by stealing the vehicle on which it is secured. Examples of acceptable vehicle-disabling methods would include trailer hitch locks, wheel locks ("boots"), steering wheel locks (clubs) or methods to disable the vehicle's engine. The licensee cannot consider the removal of a standard key from a vehicle's ignition sufficient for disabling a vehicle's engine because a vehicle can be started without the key using, for example, a duplicated key or hot-wiring techniques. Many current advances in ignition and key technology may provide additional barriers that would cause delay in accessing the radioactive material. An example is a key implanted with an electronic chip that is recognizable only to the computer programmed in the vehicle. Only this key, and not a duplicated key, would be able to start the vehicle. A licensee with this key system may request an exemption from 10 CFR 37.53(b) for that specific vehicle; however, the licensee would need to address the possibility of hot-wiring or other techniques to defeat the system. When they become commercially available, biometric recognition systems may provide a similar disabling function. Such technologies, which allow a vehicle to be operated only by a means that is not easily defeated, would be considered an appropriate means to disable a vehicle. Additionally, the licensee should not rely on deflating the tires as an effective immobilization technique because an adversary could easily reinflate them with an air pump or pressurized gas cartridge.

Q2: When a device in or on a vehicle is not under the licensee's direct control and constant surveillance, this paragraph requires the licensee to disable the vehicle "unless health and safety requirements at a site "prohibit" such disabling. What kind of health and safety requirements at a site would the NRC deem to "prohibit" vehicle disabling?

A2: The facility or site requirements or procedures would need to specify that vehicles cannot be disabled or that they need to remain accessible for immediate relocation in an emergency. The regulation will not require the disabling of a vehicle or trailer at any site at

which a known or reasonably foreseeable operational hazard, such as an explosion, fire, or release of a toxic substance, could require an individual to operate the vehicle immediately to escape or to mitigate the hazard.

Q3: Does the requirement to secure mobile devices mean that all trucks will need an alarm system when they carry a device containing a Category 1 or Category 2 quantity of radioactive material?

A3: No. However, if the truck is left unattended, the licensee must have a way to monitor and immediately detect, assess, and respond to an actual or attempted theft, sabotage, or diversion. An alarm system is an acceptable method.

Q4: Can 1/8-inch wire cables be used to secure a radiography camera instead of chains? Is the lock then more of a vulnerability than the cable?

A4: Yes. The licensee may use a heavy-duty twisted steel wire cable instead of a chain to secure mobile devices. Ideally, the wire should be thick enough so that it can be removed only with a heavy-duty cable cutter (i.e., thickness greater than a 1/8-inch or 2-millimeter No. 10 wire). However, any system is only as effective as its weakest component, and other components of the securing mechanism, including the lock, will need to have similar strength such that they too would require a heavy-duty bolt cutter for removal (typically, a tensile force of 2,000 pound-force and a shackle-cutting force test of 4,000 pound-force). Regulatory Guide (RG) 5.12, Revision 1, "General Use of Locks in the Protection and Control of: Facilities, Radioactive Materials, Classified Information, Classified Matter, and Safeguards Information," issued October 2016, and NUREG-2166 may provide some useful information.

Q5: Can two or more barriers with separate locks that share the same key or lock combination qualify as "two independent physical controls" as stipulated in the requirement for securing mobile devices?

A5: Yes. Two or more barriers with separate locks that share the same key or lock combination could qualify as "two independent physical controls." Whether separate locks use the same or different keys or combinations is an aspect of the licensee's access control program and does not determine if two barriers can be considered as "two independent physical controls." Despite the number of keys or combinations used, the most important test for ensuring that two independent physical controls exist is that each barrier is separate from the other and that neither relies on the other to perform its intended function. The same guidance applies when considering barriers to determine if material is aggregated. NUREG-2166 may provide useful information.

An important aspect of a licensee's physical protection program is controlling access at the licensee's facility. If a key-based system is used, it is essential that the licensee distribute the keys only to personnel who have been granted unescorted access and who have a need for access to perform their assigned duties. The licensee must ensure that those individuals who are part of its physical protection program understand the importance of their roles and responsibilities for controlling access, especially if these individuals control combinations or keys that secure material.

§ 37.55, "Security Program Review"

§ 37.55(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 periodically (at least annually) review the security program content and implementation.

§ 37.55(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.

§ 37.55(c)

The licensee shall maintain the review documentation for 3 years.

EXPLANATION:

Each licensee must review its security program's content and implementation at least annually and identify adverse conditions and the causes of each condition. When appropriate, the report must recommend corrective actions and review corrective actions taken. The licensee must review the report's findings and must take any additional corrective actions and reassessments necessary to preclude recurrence of the adverse condition(s).

Q&As:

Q1: How should a licensee evaluate the "effectiveness" of its security program to comply with NRC requirements for program reviews?

A1: A licensee should consider several things when evaluating the continuing effectiveness of its security program. Specifically, it should consider its ability to confirm compliance with all the applicable requirements in this subpart and to take comprehensive and effective actions to correct identified noncompliances. Most importantly, the licensee should keep in mind that continuing effectiveness is not a static condition and that an effective program review is essential to precluding repetition of conditions that lead to deficient security programs.Therefore, the hallmark of an effective program is not the absence of recorded adverse conditions or noncompliances. It is the documented evidence that the licensee has made diligent efforts to find problems and that it is continuing to reassess the effectiveness of its actions to prevent them from recurring.

Q2: What does the NRC mean by its requirement to review the security program content and implementation "at least annually"?

A2: Recognizing that some demands on a licensee's time and resources are beyond its control, the NRC will consider that the licensee is conducting a program review "at least annually" if it conducts the review each year at about the same time of year. The licensee will comply if it reviews its program at regular intervals not to exceed 12 months.

Q3: Must a licensee engage an outside contractor to conduct security program reviews?

A3: No. Although hiring an independent party to conduct security program reviews would be one way for licensees to demonstrate compliance, the regulation does not require it. The licensee should, to the extent possible, try to avoid a situation in which the implementers of the program and their supervisors are reviewing their own work. If the licensee has a large enough staff, it could establish a review team of approved individuals led by an individual, such as the RO for access authorization decisions, who works outside the management chain of the licensee's security staff. If the licensee conducts activities with Category 1 or Category 2 quantities of radioactive material at more than one location with a different security staff at each location, it could have the review team at one location review the program implemented by the staff of a different facility.

Q4: Can a licensee conduct their annual security program review at the same time as the annual audit of their radiation safety program, and if so, can the review and audit be documented together?

A4: A licensee may conduct their annual security program review at the same time they conduct the annual audit of their radiation safety program, and may document both the review and audit together, if they choose to do so. Regardless of the timing and documentation of the security program review, in accordance with the requirments in 10 CFR 37.55, it should be clear that the security program review includes a review of the radioactive material security program content and implementation, and the documentation should reflect the review along with any recommendations.

Q5: Does a licensee need to report to the NRC any noncompliance identified during a security program review?

A5: No. In accordance with the regulation, the licensee must "ensure…that comprehensive actions are taken to correct any noncompliance that is identified" by the review. The licensee must also document the corrective actions taken and "take any additional corrective actions…to preclude repetition of the condition." This documentation must be made available for NRC inspection.

Q6: What would the NRC consider a "condition adverse to the proper performance of the security program"?

A6: The NRC considers an adverse condition to be any occurrence or continuing state that degrades or could degrade, if it is not corrected, the ability of the physical security system to detect, or respond to, an actual or attempted theft, sabotage, or diversion of a Category 1 or Category 2 quantity of radioactive material without delay. An example of an adverse condition might be a breach in a physical barrier, a missing or misdirected motion detector, or a door that

fails to latch and lock itself when closed. An adequate program review should never be limited to looking only for existing or imminent noncompliances, but it should assess or reassess all conditions that may call into question the continung effectiveness of the licensee's security program.

Q7: The regulation requires the report resulting from a program review to recommend corrective actions "when appropriate." When should a licensee recommend corrective actions?

A7: The rule does not specify particular conditions for which corrective action is required; however, a program review report should, as prudent practice, recommend at least one corrective action for each noncompliance or "condition adverse to the proper performance of the security program" identified as a result of the review.

Q8: What should a licensee consider as "review documentation" for the purposes of this subsection?

A8: The licensee should retain the approved final version of its annual review report and any attachments or enclosures related to that report. Related records should include the membership and leadership of the review team (if applicable), a description of the management approval process for the annual report (if applicable), root cause analyses for identified noncompliances or adverse conditions, recommended corrective actions, evaluations of the effectiveness of past corrective actions, and other documents that were considered in the review. Review documentation should also include minority views on issues in the report on which significant professional disagreement was present. The NRC does not expect a licensee to retain meeting records, the notes of each member of a review team, or rough drafts of its annual security program reviews.

Q9: This section introduces the term "radioactive material security program." Is there a difference between this term and the term "security program" for the purposes of this section?

A9: No. Both refer to the security program required by 10 CFR Part 37.

§ 37.57, "Reporting of Events"

§ 37.57(a)

The licensee shall immediately notify the LLEA after determining that an unauthorized entry resulted in an 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's 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.

EXPLANATION:

A licensee must notify the LLEA immediately after determining that an unauthorized entry resulted in an actual or attempted theft, sabotage, or diversion of radioactive material. The licensee must also notify the NRC Operations Center as soon as possible (not later than 4 hours after discovery) but not at the expense of causing delay or interfering with the LLEA response to the event.

Q&As:

Q1: The regulation requires a licensee to notify the LLEA immediately after initiating "an appropriate response" to an actual or attempted theft, sabotage, or diversion of a Category 1 or Category 2 quantity of radioactive material. What kind of response by the licensee would the NRC consider "appropriate"? Under what circumstances, if any, would an armed licensee response before the arrival of the LLEA be considered appropriate?

A1: As soon as the licensee has determined that an actual or attempted theft, sabotage, or diversion is in progress, an appropriate licensee response pending the arrival of LLEA assistance would depend on the licensee's assessment of the intruder's intent and his or her ability to carry out theft, sabotage, or diversion. The appropriateness of the licensee's response should also consider the applicability of the licensee's written procedures to the actual circumstances. For example, these procedures could require the licensee to consider the proximity of the intrusion to the target material, the quantity of material at risk of sabotage or unauthorized removal, the quality and quantity of any remaining physical barriers to the removal of the material or the escape of the intruders, and if the physical barriers are likely to delay the intruders sufficiently for the anticipated arrival of the LLEA. The regulation does not require a licensee's security staff to be armed for its response to be deemed appropriate. A decision to arm a facility's security personnel is solely up to the licensee and should be in accordance with applicable State laws.

Q2: The regulation requires the licensee to notify the NRC Operations Center "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…[and] in no case…later than 4 hours after its discovery." What would the NRC consider to be causes of delay or interferences with the LLEA's response sufficient to justify a licensee's decision to postpone notifying the NRC?

A2: Any justification for postponing a notification to the NRC would depend on the circumstances of the event. Perhaps the most compelling justification would be a situation requiring a licensee to devote all available resources to restoring its facility to a safe condition or to protecting individuals from actual or threatened physical harm, as in the case of a fire or explosion, or from an armed hostage-taking event. An ongoing attempt to steal the material or use it for sabotage could also require the licensee to assist the LLEA before or after its arrival. A similar necessity for the licensee's assistance could be the threat of a bomb hidden somewhere on the facility site. Under such circumstances, the responding licensee staff could be justified in postponing notification of the NRC until the LLEA had determined that the licensee's assistance in the response is no longer required. However, if an employee of the licensee outside of its onsite security staff became aware of the emergency and was not immediately needed to help the security staff respond to the event, the NRC would expect that employee to notify his or her management and would expect the licensee to notify the agency as soon as possible. The same would be true if the licensee discovered an apparent theft of a Category 1 or Category 2 quantity of radioactive material after the fact; the NRC would expect the licensee to notify it immediately after notifying the LLEA and initiating measures to ascertain if the missing material was still on the premises. The NRC envisions only the most extreme and unusual circumstances to justify delaying a notification of more than 4 hours after the discovery of any attempted or actual theft, sabotage, or diversion.

Q3: To avoid an NRC notice of violation after the event, would I have to obtain confirmation from the LLEA that a delay in the licensee's notification of the NRC was necessary to avoid delaying or interfering with the LLEA's response?

A3: No. However, the licensee is not prohibited from seeking the LLEA's endorsement of its decision to delay NRC notification. While the NRC would take the LLEA's judgment into account, the agency's determination of compliance or noncompliance with this notification requirement would rest principally on an assessment of the specific facts and circumstances of the situation, not on the LLEA's judgment.

Q4: Should a radiographer at a temporary jobsite notify the LLEA if a device is stolen from the temporary jobsite?

A4: Yes. The licensee should contact the LLEA that can provide the fastest and most effective response. (See also the Q&As for 10 CFR 37.45(d) and 10 CFR 37.49(d).)

Q5: When I determine that an actual or attempted theft, sabotage, or diversion of radioactive materials has begun, what information must I report to what organization (the NRC or LLEA)?

A5: In the event of any actual or attempted theft, sabotage, or diversion of radioactive material protected under 10 CFR Part 37, the licensee must notify the LLEA immediately, followed soon after by a call to the NRC Operations Center at 301-816-5100. Telephone calls to notify the NRC should be made as promptly as possible but not at the expense of causing delay or interfering with the LLEA's response to the event.

The licensee's notification to the LLEA should provide, at minimum, a basic "who, what, when, and where" description of the event. To facilitate a timely and effective LLEA response, the licensee should also answer any follow-on questions from the LLEA. For example, these questions could request information on landmarks at the affected facility's location; an estimate of the kinds and quantities of radioactive material that could be affected and a description of the

type of container for the material (e.g., a stationary or a mobile device or another type of container); the number of intruders believed to be involved and available information about their weaponry, equipment, and apparent objectives; the location(s) of the unauthorized activity within the facility and the closest safe access point for incoming LLEA personnel; a description of the physical barrier system deployed to isolate the radioactive materials from unauthorized access; and a summary description of the licensee's other security measures and resources available to assist LLEA responders. The licensee may give information to the LLEA on its physical protection of radioactive materials without violating the information protection requirements in 10 CFR 37.43(d).

The licensee's notification to the NRC should provide, at minimum, a basic "who, what, when, and where" description of the event. Depending on the NRC's need for additional information, the licensee could also provide some of the information already provided to the LLEA. For example, this information could include the number of intruders believed to be involved and available information about their weaponry, equipment, and apparent objectives; a description of the physical barrier system deployed to isolate the radioactive materials from unauthorized access; and a summary description of the licensee's other security measures and resources available to assist responders. For either kind of agency notification, the licensee should consider the known and potential needs of the recipient agency for mission-related information and should address these issues, if possible, in advance in its security plan and procedures. The licensee should also consider that compliance with these notification requirements will not relieve it from making other reports, as required by other State or local laws.

Q6: Since facilities are also broken into to obtain equipment or valuables other than radioactive materials, do licensees need to notify the LLEA and the NRC Operations Center every time there is a break-in?

A6: No. The regulation does not require a licensee to request LLEA assistance and to notify NRC offices except in response to an actual or attempted theft, sabotage, or diversion of a Category 1 or Category 2 quantity of radioactive material. Thus, the licensee's decision on whether to call the police and affected regulators would depend on an assessment of whether the intent of the detected break-in was to perpetrate an unauthorized use of the radioactive material. This assessment of intent could, in turn, depend partly on the proximity of the detected intrusion to any security zone that the licensee has established to isolate the radioactive material from unauthorized access. A licensee's assessment and response to an intrusion alarm in an office supply stockroom could be entirely different from its assessment and response to an intrusion alarm in the radioactive materials storage area. The NRC expects the licensee's security plan and procedures to address ways to distinguish an actual or attempted theft, sabotage, or diversion of the subject radioactive material from a break-in for other purposes. Although the licensee would probably still call the LLEA for a break-in to the office area, it would not need to notify the NRC unless radioactive materials were involved.

Q7: If someone reports lost or missing Category 1 or Category 2 quantities of radioactive material, how would the NRC respond?

A7: If such an incident occurs, the NRC will expect the licensee to implement the appropriate elements of its security plan. The NRC will also monitor the situation to ensure that the licensee is taking the appropriate actions to locate and recover the missing material. The National Response Framework requires the NRC to notify and coordinate with other Federal agencies as needed.

§ 37.57, "Reporting of Events" (continued)

§ 37.57(b)

The licensee shall assess any suspicious activity related to possible theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material and notify the LLEA as appropriate. As soon as possible but not later than 4 hours after notifying the LLEA, the licensee shall notify the NRC's Operations Center (301-816-5100).

EXPLANATION:

A licensee must assess any suspicious activity related to the possible theft, sabotage, or diversion of radioactive material and must notify the LLEA as appropriate. The licensee must also notify the NRC Operations Center as soon as possible, but not later than 4 hours after notifying the LLEA.

Q&As:

Q1: Why am I required to report suspicious activities to the NRC?

A1: The reporting of suspicious activities is important for evaluating the threat against licensed facilities and material. The NRC reviews individual notifications of suspicious activities to evaluate if potential preoperational activities (i.e., multiple events at a single site or multiple events at multiple sites) may be part of a larger plan and to integrate this information with other agencies in the homeland security and intelligence communities. The NRC is not asking licensees to actively gather intelligence but instead to report information that they believe may be relevant to the security of their facility or activity. The reporting requirements provide a consistent means of communicating this information to the NRC.

Q2: Do I need to call the NRC after the LLEA for issues not related to my licensed activities with radioactive materials?

A2: No. The licensee does not need to contact the NRC for such issues unless it concludes that these issues could affect the security or safety of its materials (e.g., if the licensee discovers an unauthorized weapon, drugs, or other contraband inside a controlled area). The NRC broadly worded both the regulations and guidance in this area to give the licensees flexibility.

Q3: Where can I find additional guidance on what the NRC considers suspicious activities that should be reported?

A3: Annex D, "Examples of Reportable Suspicious Activities under 10 CFR 37.57(b)," to Subpart C provides examples of activities that could be considered suspicious; however, these are not all-inclusive examples. Each licensee is responsible for developing and periodically reassessing its own criteria for identifying suspicious activities based on local conditions, recent events, and lessons learned by others. For this purpose, licensees may find the Safeguard New York publication of the New York State Division of Homeland Security and Emergency Services useful because it provides examples of suspicious activities and indicators for heightened

surveillance. In addition, a more exhaustive analysis can be found in a 2006 University of Arkansas study, funded by the National Institute of Justice, entitled "Pre-Incident Indicators of Terrorist Incidents: The Identification of Behavioral, Geographic, and Temporal Patterns of Preparatory Conduct," issued March 2006. Many other sources are available on and off the Internet.

Q4: If I don't think an unusual activity is "suspicious" and don't report it, and it turns out to be related to a security incident, will I be in violation of this requirement?

A4: No. The NRC recognizes that judgments about what is "suspicious" are inherently subjective and are often influenced by personal experience and community history. After an event, it is more important that the licensee learn from it and take measures to prevent its reoccurrence than it is to assign individual blame. For this reason, the licensee must report, even after the fact, any unusual but seemingly nonthreatening activity that, in retrospect, is found to have been a precursor to an actual or attempted theft, sabotage, or diversion. The NRC, law enforcement agencies, and the intelligence community need this information to help identify the likely perpetrators of similar tactics in the future and to integrate as much credible evidence as possible into a pattern that might indicate an ongoing adversary strategy. Prompt licensee reporting of suspicious activities also enables the NRC to alert other licensees to look for similar activities as possible early indicators of a pending attack.

Q5: What if one of my employees or contractors thinks *everything* is suspicious and frequently reports any nonroutine activity as suspicious? How can I discourage over-reporting that could have the counterproductive effect of making my LLEA(s) *less* inclined to respond?

A5: The licensee can develop criteria for identifying suspicious activities based on Annex D and any other pertinent sources, including one or more of those cited above. The licensee should incorporate these criteria into its site security procedures, make these procedures available to all facility staff and contractors, and should require, in their post-analysis of event (e.g., after-action reports), that observers of suspicious activities refer to the security procedures for criteria to report suspicious activities. Depending on the size of the licensee's workforce and on the possibility of unwanted chilling effects on reporting, the licensee can also require a first observer to report to the site security officer or his or her designee before reporting to the LLEA and the NRC. In addition, 10 CFR 37.57(b) does not require the reporting to the LLEA of all activities that might at first appear suspicious; the regulation requires reporting "as appropriate," which allows licensees to investigate before deciding if the activity warrants reporting. However, if the licensee reports suspicious activity to the LLEA, then it must also report the activity to the NRC.

§ 37.57, "Reporting of Events" (continued)

§ 37.57(c)

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.

EXPLANATION:

The licensee must submit a written report within 30 days to the NRC for its analysis and evaluation. The report must identify any necessary corrective actions.

Q&As:

Q1: Other than identifying "any necessary corrective actions," what, at a minimum, should a licensee's written report on a security incident contain to provide "sufficient information for NRC analysis and evaluation"?

A1: The content and detail of the report would depend on a number of considerations, including the nature and severity of the security incident, whether it was a first occurrence or a reoccurrence and if it is likely to recur, the adequacy of the licensee's monitoring efforts, the timeliness of the initial detection, the accuracy of the assessment, and the timeliness and potential effectiveness of the measures implemented in response to the incident. If the incident occurred for the first time, the report should discuss whether the licensee's security plan and procedures had anticipated the incident. In addition to identifying corrective actions, the report should describe the data and analyses that supported the licensee's identification of the root and significant contributing cause(s) of the incident and should explain how these data and analyses supported the licensee's selection of corrective actions identified. If the incident was a recurrence of a similar incident, the report should briefly describe past corrective actions and the findings of past reassessments and should identify likely reasons that the past corrective actions did not prevent a recurrence. The report should then explain the basis for the licensee's determination that the proposed new or revised corrective actions or that changes in the licensee's implementation of these actions are likely to prevent a recurrence of the condition or to mitigate its effects.

ANNEX D

EXAMPLES OF REPORTABLE SUSPICIOUS ACTIVITIES UNDER 10 CFR 37.57(b)

A licensee should not consider security events reported under Title 10 of the *Code of Federal Regulations* (10 CFR) 37.57(b) as performance failures; instead, the U.S. Nuclear Regulatory Commission (NRC) considers timely and comprehensive communication of matters relating to threats, attacks, or suspicious activities a vital component of its efforts to assess the current threat environment. Because adversaries of the United States have demonstrated an ability to attack multiple independent targets, timely reporting of nonthreatening, but suspicious, activities is important to the NRC, law enforcement agencies, and the intelligence community in their efforts to integrate potential adversary plans, intentions, and suspicious event reports into a current threat assessment. Prompt reporting of actual or imminent hostile actions permits the NRC to execute its strategic missions of communicating to senior Federal officials and other licensees about hostile actions against the facilities and activities that the agency regulates, thereby protecting public health and safety, the common defense and security, and the environment.

In accordance with 10 CFR 37.57(b), the licensee should report the following potentially security-related events involving suspicious activity that may indicate preoperational surveillance, reconnaissance, or intelligence-gathering activities directed against licensees or their facilities:

- an individual(s) with nonroutine interests or inquiries related to security measures; personnel or vehicle entry points and access controls; or vehicle barrier systems, including fences, walls, or other barriers
- an individual(s) photographing or videotaping licensed facilities without approval
- suspicious attempts to recruit or compromise employees or staff and licensee contractors who have knowledge of key personnel, facilities, or systems to provide security information
- an individual who loiters for no apparent purpose in areas where he or she could gather intelligence or could perform preoperational reconnaissance
- an individual who behaves suspiciously (e.g., fleeing, moving quickly away from the licensee or certificate-holder personnel, or making unexpected vehicular movement)
- an individual who is secretively sketching, making a map, or taking notes on the facility
- an individual who is eliciting information from security or other site personnel on security systems or vulnerabilities
- unusual challenges to security systems that could represent attempts to gather information on system performance or personnel or equipment response actions

- unauthorized attempts to probe or gain access to the licensee's business secrets or other sensitive information or to control systems, including the use of social engineering techniques (e.g., impersonating authorized users)

- theft or suspicious loss of official company identification documents, uniforms, or vehicles necessary to access plant facilities

- use of forged, stolen, or fabricated documents to support access control or authorization activities

- unusual attempts to obtain information or documents related to site security training, techniques, procedures, or practices

- discovery of Internet site postings that make violent threats against specific licensed facilities or activities

- unusual threats or terrorist-related activities that become known to facility security or management involving (1) unusual surveillance, probing, or reconnaissance, (2) attempts to gain unauthorized access, (3) attempts to gain access to or acquire hazardous or dangerous materials, (4) unusual use of materials, or (5) financing to support terrorist activities

- stated threats against the licensee's facility or staff, unless the licensee determines that the threats are unsubstantiated

- unsubstantiated bomb or extortion threats that are considered to be related to harassment, including those that represent tests of response capabilities or intelligence-gathering activities or an attempt to disrupt facility operations

- fires or explosions of suspicious or unknown origin

- the unauthorized operation of, manipulation of, or tampering with radioactive material in quantities of concern or security-related structures, systems, and components that could prevent the implementation of the licensee's protective strategy

- the intentional cutting of wires that does not affect the facility or security operations

- the modification of security equipment that renders the equipment inoperable

- the overt changing of equipment or control settings

The NRC does not consider this list to be exclusive or exhaustive. Additionally, licensees should evaluate an event that is not reportable under this requirement for reporting or recording under the other provisions of 10 CFR Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material."

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"

§ 37.71, "Additional Requirements for Transfer of Category 1 and Category 2 Quantities of Radioactive Material"

A licensee transferring a category 1 or category 2 quantity of radioactive material to a licensee of the Commission or an Agreement State shall meet the license verification provisions listed below instead of those listed in § 30.41(d) of this chapter:

§ 37.71(a)

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 location requested for delivery. If the verification is conducted by contacting the license issuing authority, the transferor shall document the verification. For transfers within the same organization, the licensee does not need to verify the transfer.

§ 37.71(b)

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. If the verification is conducted by contacting the license issuing authority, the transferor shall document the verification. For transfers within the same organization, the licensee does not need to verify the transfer.

§ 37.71(c)

In an emergency where the licensee cannot reach the license issuing authority and the license verification system is nonfunctional, the licensee may accept a written certification by the transferee that it is authorized by license to receive the type, form, and quantity of radioactive material to be transferred. The certification must include the license number, current revision number, issuing agency, expiration date, and for a category 1 shipment the authorized address. The licensee shall keep a copy of the certification. The certification must be confirmed by use of the NRC's license verification system or by contacting the license issuing authority by the end of the next business day.

§ 37.71(d)

The transferor shall keep a copy of the verification documentation as a record for 3 years.

EXPLANATION:

Before transferring Category 1 or Category 2 quantities of radioactive material, the shipping licensee must verify that the receiver's license is valid. The licensee can conduct this

verification by using the NRC's License Verification System (LVS) or by contacting the agency (the NRC or Agreement State) that issued the receiver's license. The licensee must maintain verification documentation for 3 years.

Q&As:

Q1: How does a licensee conduct the verification?

A1: The licensee can conduct these verifications by using the NRC's LVS or, if the system is not available, by contacting the license-issuing authority (i.e., the NRC or the appropriate Agreement State agency). Licensees should contact the appropriate NRC regional office to verify the validity of NRC licenses. Information on Agreement State contacts appears on the NRC Web page at https://scp.nrc.gov/asdirectory.html. Use of the LVS is the preferred method of license verification.

Q2: May I use a fax or e-mail to verify the validity of a license or just keep a copy of the recipient's license on file?

A2: No. Neither facsimile nor e-mail provide the positive identification needed for verifying the validity of a license because an individual can alter an electronic image of the license to change its possession limits, authorized location of use, or even the name of the person who received the license. Keeping a copy of the recipient's license on file also is inadequate for verifying the validity of a license because the license could be amended or terminated. The licensee shipping the material would not know that the intended recipient's license was no longer valid. The regulation in 10 CFR 37.71(a) requires the licensee to use the LVS or to contact the regulatory agency (the NRC or Agreement State) to verify that a license is valid before shipping Category 1 or Category 2 quantities of radioactive material to a domestic company.

Q3: What is the License Verification System?

A3: The LVS is a Web-based NRC system designed to enable users to verify electronically the validity of a license issued by either the NRC or an Agreement State. It is the preferred method for license verification. The NRC has established a help desk to assist users by answering questions and resolving issues related to credentialing, login procedures, system use, transaction reporting, and any problems encountered in using the Integrated Source Management Portfolio. Users may also contact the help desk at 1-877-671-6787 to submit system change requests (to remedy defects or enhance functionality). If the system is not available, licensees would need to contact the appropriate licensing agency. Each inquiry is logged and tracked for future reference. Information on the LVS is at https://www.nrc.gov/security/byproduct/ismp/lvs.html.

Q4: If the licensee is transferring the material to the U.S. Department of Energy (DOE) or to an entity that does not have an NRC or Agreement State license (e.g., for exporting the material), does it still need to verify the transfer?

A4: No. The license verification requirement applies only if the licensee is transferring Category 1 or Category 2 quantities of radioactive material to a licensee of the NRC or an Agreement State. License verification is not required to transfer material to DOE or to any other Federal entity that does not have an NRC or Agreement State license. However, licensees

exporting material would need to meet the requirements in 10 CFR Part 110, "Export and Import of Nuclear Equipment and Material," for checking the documentation that the recipient has the necessary authorization under the laws and regulations of the importing country.

Q5: Why are the Category 1 and Category 2 verification requirements different?

A5: Because Category 1 quantities of radioactive material are of greater concern than Category 2, the regulation in 10 CFR 37.71(a) subjects the licensee that is transferring Category 1 quantities to the additional requirement of verifying that the receiving licensee is authorized to receive radioactive material at the address requested for delivery.

Q6: When should a licensee document the verification, and how should it be documented?

A6: The rule requires documentation of verification only if the shipping licensee (the licensee sending the licensed material) conducts the verification by contacting the NRC or Agreement State license-issuing authority. If the licensee uses the LVS, the system will save the record; the licensee would not need to keep other documentation. If a licensee is unable to complete an online verification using the LVS, a manual procedure and verification form (NRC Form 749, "Manual License Verification Report") can be used to facilitate the verification.

If the licensee contacts the license-issuing authority directly, it should document the communication. If the contact was by phone, the licensee should prepare a note for the file that contains information on the transfer (applicable data elements should include the company name, the license number, the material being transferred, and the address for Category 1 shipments), the date of the communication, and the name of the individual at the licensing agency. If the communication was by e-mail or facsimile, the licensee should retain a copy of the e-mail or facsimile from the licensing agency. For more information, go to https://www.nrc.gov/security/byproduct/ismp/lvs/procedure.html.

Q7: If I can't reach the regulatory agency or access the LVS to verify that the recipient of my shipment is licensed to receive and possess the material, do I have to postpone the shipment until I obtain the verification?

A7: No. The rule provides an alternative that allows licensees to ship in emergency situations in which the regulator cannot be reached or the LVS is inaccessible. Under 10 CFR 37.71(c), the shipping licensee may obtain a written certification from the receiving licensee noting that it is authorized to receive the requested radioactive material. The certification must include the license number; current revision number; issuing agency; expiration date; and, for a Category 1 shipment, the authorized address. The shipping licensee must follow up with LVS or the license-issuing authority by the end of the next business day to confirm that the recipient's license is valid. A copy of the certification must be retained. The licensee can fax or e-mail the certification, and receipt of the certification through the mail is not necessary.

Q8: If I rely on the recipient licensee's certification to ship material under the provisions of 10 CFR 37.71(c) for emergencies, what do I do if I discover that the recipient's license is not valid for the transfer after the shipment has been sent?

A8: First, the licensee should contact the regulatory agency to verify that the recipient's license authorizes the shipment, since LVS may not have yet updated information to reflect a

license amendment. If the regulatory agency confirms that the recipient is not authorized to receive the material, the licensee should discuss with the regulatory agency the actions that should be taken. One possible action is to contact the carrier to determine if it has delivered the shipment. If it has not, the licensee may be able to request that the carrier return the shipment. If the shipment has been delivered, the licensee may need to notify the LLEA at the licensee's location and the NRC's Operation Center. Another possible action is for the recipient to request a license amendment that would authorize the radioactive material in question.

Q9: What should I do if I receive an unusual order?

A9: The regulations in 10 CFR Part 37 do not require a shipping licensee to notify its regulatory agency of an unusual order. The licensee should, however, as good practice, carefully review orders from unfamiliar entities, even if their licenses and possession limits can be verified. Similarly, as good practice, the licensee should carefully review an order from a previous recipient licensee if the order appears unusual compared to previous shipments to that licensee in regard to the type, form, destination, and quantity of material that will be shipped.

Unusual orders raise heightened security concerns, including attempts to obtain radioactive materials, and shipping licensees should take appropriate precautions. These precautions include contacting the receiving licensee or the governing regulatory authority or both.

Q10: Typical source or device manufacturer and distributor licensees could ship 50 to 60 sources a day to user licensees in many different jurisdictions. An M&D licensee could thus be making 50 or 60 calls a day—or more, if the M&D licensee hasn't gotten an immediate response on its first call—to ask the regulatory authority for verification for each shipment. The same problem could arise for user licensees returning these sources or devices to the M&D licensee; every single user licensee would have to call the appropriate Agreement State or NRC office to verify that the M&D licensee is authorized to receive the sources. Is verification necessary for each shipment, even for returns of Category 2 or higher quantities of radioactive materials to the M&D licensee?

A10: Yes. Verification of each shipment is necessary because verification of the intended recipient's license before transfer enhances the security of the material by validating the licensee's legitimacy. Using the LVS instead of calling the regulatory agency is less burdensome and allows 100-percent validation of licenses before the transfer of Category 1 or Category 2 quantities of radioactive material.

§ 37.73, "Applicability of Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material during Transit"

§ 37.73(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 (e); 37.77; 37.79(a)(1), (b)(1), and (c); and 37.81(a), (c), (e), (g) and (h).

§ 37.73(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 (c); 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.

§ 37.73(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.

§ 37.73(d)

Each licensee that imports or exports category 1 quantities of radioactive material shall comply with the requirements for physical protection during transit contained in §§ 37.75(a)(2) and (e); 37.77; 37.79(a)(1), (b)(1), and (c); and 37.81(a), (c), (e), (g), and (h) for the domestic portion of the shipment.

§ 37.73(e)

Each licensee that imports or exports category 2 quantities of radioactive material shall comply with the requirements for physical protection during transit contained in §§ 37.79(a)(2), (a)(3), and (b)(2); and 37.81(b), (d), (f), (g), and (h) for the domestic portion of the shipment.

EXPLANATION:

This section establishes which provisions apply for shipments of Category 1 and Category 2 quantities of radioactive material. The shipping licensee is responsible for meeting the requirements unless the receiving licensee agrees in writing to assume responsibility. For ease of reference, see the table below.

Applicability Table for Subpart D Requirements

Subpart D	Category 1 Shipment	Category 2 Shipment*	Domestic Portion of Category 1 Import/Export	Domestic Portion of Category 2 Import/Export
§ 37.75(a)	✓			
§ 37.75(a)(2)	✓		✓	
§ 37.75(b)		✓		
§ 37.75(c)		✓		
§ 37.75(d)		✓		
§ 37.75(e)	✓	✓	✓	
§ 37.77	✓		✓	
§ 37.79(a)(1)	✓		✓	
§ 37.79(a)(2)		✓		✓
§ 37.79(a)(3)		✓		✓
§ 37.79(b)(1)	✓		✓	
§ 37.79(b)(2)		✓		✓
§ 37.79(c)	✓	✓	✓	
§ 37.81(a)	✓		✓	
§ 37.81(b)		✓		✓
§ 37.81(c)	✓		✓	
§ 37.81(d)		✓		✓
§ 37.81(e)	✓		✓	
§ 37.81(f)		✓		✓
§ 37.81(g)	✓	✓	✓	✓
§ 37.81(h)	✓	✓	✓	✓

* For shipments of Category 2 quantities that meet the criteria of 10 CFR 71.97(b), the shipping licensee must also comply with the advance notification provisions of 10 CFR 71.97, “Advanced Notification of Shipment of Irradiated Reactor Fuel and Nuclear Waste.”

Q&As:

Q1: Would Subpart D requirements apply to a shipment of two or more packages if each package contains less than a Category 2 quantity but, in aggregate, equals or exceeds a Category 2 quantity?

A1: Yes. Each NRC licensee must meet the requirements in Subpart D for any radioactive material quantity that meets or exceeds a Category 2 quantity regardless of how many individual packages may be in the shipment. This question assumes that the material in the two or more individual packages aggregates to a Category 2 quantity, and the regulation in 10 CFR 37.73(c) provides that "[f]or shipments of Category 2 quantities of radioactive material, each shipping licensee shall comply" with the requirements in Subpart D referenced in this subsection. Because this provision applies to all shipments and does not refer to the number of packages in each shipment, a licensee cannot avoid meeting these requirements by partitioning the total shipping quantity into multiple packages on the same vehicle. An adversary (including an insider) in control of the transport vehicle would have unauthorized access to the total quantity of radioactive material in the shipment.

Q2: Which licensee is responsible for meeting the requirements of Subpart D?

A2: Generally, the shipping licensee is responsible for meeting the requirements in Subpart D. However, the receiving licensee may choose to agree, in writing, to arrange for the required in-transit physical protection measures. In that case, the licensee that receives the shipment would be responsible for compliance with the physical protection requirements of this subpart.

Q3: During what portion of the shipment are the security requirements applicable for Category 1 or Category 2 quantities of imports?

A3: The Category 1 and Category 2 import requirements are applicable only from the point that the material enters the United States (i.e., the domestic portion of the shipment after the package clears U.S. Customs and Border Protection).

Q4: For material being exported, is the licensee required to follow the security requirements for the entire trip?

A4: No. The licensee or transporter is responsible for following DOT and NRC security provisions for road and rail shipments only for the domestic portion of the trip until the shipment comes under the jurisdiction of another Federal Government agency (e.g., the Federal Aviation Administration or DHS) at a port, border crossing, or airport.

Q5: Do the security provisions for Category 1 and Category 2 quantities of radioactive material apply during the time when shipments are placed in interim storage at the shipping licensee's facility awaiting pickup?

A5: Yes. The security provisions do apply. Licensees that ship Category 1 or Category 2 quantities should ensure that any interim storage is minimized or, when it cannot be avoided, that required security provisions are met.

Q6: Do the security provisions apply to transshipments?

A6: No. The security provisions of Subpart D do not apply to transshipments of Category 1 or Category 2 quantities of radioactive material. Transshipments are shipments that are originated by a foreign entity in one country, pass through the United States, and continue on to a recipient in another country.

§ 37.75, "Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of Radioactive Material"

§ 37.75(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:

§ 37.75(a)(1)

Preplan and coordinate shipment arrival and departure times with the receiving licensee;

§ 37.75(a)(2)

Preplan and coordinate shipment information with the governor or the governor's designee of any State through which the shipment will pass to:

§ 37.75(a)(2)(i)

Discuss the State's intention to provide law enforcement escorts; and

§ 37.75(a)(2)(ii)

Identify safe havens; and

§ 37.75(a)(3)

Document the preplanning and coordination activities.

EXPLANATION:

Each licensee that ships Category 1 quantities of radioactive material must conduct preplanning and coordination activities with the receiving licensee and with each State that the shipment crosses.

Q&As:

Q1: What happens if a shipment has to be rerouted during transport because of bad weather or other developments that neither I nor my carrier can control? How can I be sure in advance of the States that my Category 1 shipment will pass through and that I'll need to coordinate with under this subsection?

A1: The licensee can be reasonably sure about the alternative routes for a shipment because the carrier is subject to Federal DOT regulations under 49 CFR 397.101, "Requirements for Motor Carriers and Drivers," on highway-route-controlled quantities of radioactive materials. These regulations require carriers to minimize the shipment's time in transit and to use a preferred route, which is defined as "an Interstate System highway," unless a State-routing agency designates an alternative route. To ensure its compliance with

10 CFR 37.75(a) requirements for the preplanning and coordination with States through which the shipment will pass, the licensee should, as good practice, ensure that its shipment contract with the carrier clearly obligates the carrier to also comply with these requirements when an unusual event, such as a blizzard, requires the rerouting of the shipment through a State other than those along the originally planned route.

Q2: What type of documentation is required under 10 CFR 37.75(a)(3)?

A2: The regulation in 10 CFR 37.75(a)(3) requires licensee to document the preplanning and coordination activities required by 10 CFR 37.75(a)(1) and 10 CFR 37.75(a)(2) for shipments of Category 1 quantities of radioactive materials. The shipping licensee should therefore document any phone conversations or e-mail communications that it has with the receiving licensee to include the names of the individuals participating in the call or e-mail communications, a general description of the shipment, and the departure and arrival times. The shipping licensee should also document any interactions with the Governor's designee to include the names of the individuals participating in the call or e-mail, the route-affected States' decisions on escorts, the safe havens identified, and any other information that the licensee considers pertinent to document compliance with the requirements in this subsection.

Q3: What does the NRC consider to be a safe haven?

A3: A safe haven is 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 LLEAs." For additional discussion of this definition, see the pertinent Q&As under 10 CFR 37.5.

Licensees should use the following criteria to identify safe havens for shipments:

- The safe haven is near the route (i.e., readily available to the transport vehicle).
- Security from local, State, or Federal assets is present or is accessible for a timely response.
- The site is well lit, has adequate parking, and can be used for emergency repair or for waiting for the LLEA response on a 24-hour basis.
- Additional telephone facilities are available if the communications system of the transport vehicle fails to function properly.

Possible safe haven sites include Federal sites that have significant security assets, such as military base gates or guarded agency parking lots; secure company terminals; State weigh stations; State welcome stations or rest areas; scenic overlooks or visitors' centers; truck stops with secure areas; and LLEA sites, including State police barracks.

Identifying safe havens is the licensee's responsibility. If a licensee is having difficulty identifying a safe haven, it can contact the NRC, the appropriate Agreement State agency, or State or local law enforcement officials.

Q4: Must I have more than one safe haven for a Category 1 quantity shipment? How many should I identify?

A4: The rule does not specify a minimum number of safe havens for any shipment, but the shipping licensee and carrier have an important interest in identifying available places to stop along the route on which the transport vehicle could securely remain or safely wait for assistance.

Q5: How far apart should these safe havens be? Is there a minimum distance for which at least one safe haven is required?

A5: The rule does not specify a minimum distance between safe havens. In NUREG-0561, Revision 2, "Physical Protection of Shipments of Irradiated Reactor Fuel: Final Report," issued April 2013, the NRC recommends a minimum distance of 50 miles between safe havens. However, the agency recognizes that safe havens at that interval may not be available in some more remote areas. In most areas, commercial truck stops, service stations, State weigh stations, welcome stations, rest areas, and paved scenic overlooks or visitor parking for historic sites should provide ample alternatives to shipment preplanners and coordinators.

Q6: Is there a list of approved safe havens?

A6: No. However, if a licensee is having difficulty identifying a safe haven, it may contact the NRC, the appropriate Agreement State agency, or State or local law enforcement officials.

Q7: If a State imposes other transportation security requirements outside the scope of 10 CFR Part 37, do I have to meet those, too?

A7: Yes. Unless any DOT requirement under 49 CFR preempts those security requirements, any State may apply additional requirements beyond those necessary for Agreement State compatibility under 10 CFR Part 37 while the shipment is within the State's borders. The regulations in 10 CFR Part 37 do not preempt other State requirements that may apply, such as State police escorts for radioactive material shipments. Licensees must comply with these State requirements and the requirements of the NRC or the Agreement State agency with jurisdiction.

§ 37.75, "Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of Radioactive Material" (continued)

§ 37.75(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 coordinate the shipment no-later-than arrival time and the expected shipment arrival with the receiving licensee. The licensee shall document the coordination activities.

EXPLANATION:

Licensees shipping Category 2 quantities of radioactive material must coordinate the expected arrival time and the no-later-than (NLT) arrival time with the receiving licensee.

Q&As:

Q1: If I'm a shipping licensee, how soon after I "plan to transport" must I coordinate with a receiving licensee?

A1: The licensee may begin its coordination activities with the receiving licensee at any time after it has decided to ship the material. However, under this subsection, the licensee must complete these activities before it can transport the material or before it consigns the material to a carrier for transport. The licensee does not need to begin coordinating with the receiving licensee as soon as it confirms an incoming order or decides to transfer the material.

Q2: What is meant by "NLT arrival time"?

A2: As defined in 10 CFR 37.5 of this rule, "NLT 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." Licensees do not have to begin an investigation if the shipment does not arrive by the estimated arrival time. For a Category 2 shipment, the NLT arrival time may not be more than 6 hours after the estimated arrival time. The NLT date and time effectively require verification that the shipment arrived within the expected timeframe. If the shipment has not arrived by the agreed-upon NLT arrival time, the shipping licensee must trace the location of the shipment and must decide whether to report to affected law enforcement authorities an unusual occurrence that could lead to a theft or diversion of the material.

Q3: What does it mean to "coordinate," how much is enough, and can the shipping licensee send the receiving licensee a FedEx or other carrier's tracking number to serve as coordination?

A3: Under this subsection, the licensee needs only to contact the receiving licensee and to establish an expected arrival time and NLT arrival time for the shipment. Sending a FedEx or other carrier's tracking number without contacting the receiving licensee does not establish an NLT arrival time. This coordination can be as simple as sending an e-mail stating that the

shipment is expected to arrive via FedEx by noon on a specified date and may include the tracking number in the e-mail, for example, and that the NLT arrival time is 6 p.m. on that day. Although this coordination is the only kind required, the licensee and the recipient licensee are free to negotiate any other understandings, such as times and methods of communication; contact information for the carrier; contact information for LLEAs in areas through which the shipment will pass; or any other information that both parties agree would better enable them to anticipate, and to be prepared for, sources of delay or would otherwise better enable them to make the shipment as incident free as possible. Licensees may coordinate by phone, facsimile, e-mail, or face-to-face meetings; however, they must document this activity and the agreements that it produces, as required by this subsection.

Although a tracking number may establish an estimated arrival date and time, it does not establish an NLT arrival time. Likewise, the shipping licensee should be aware of changes in the carrier's estimated arrival date and time so that it can provide updates to the recipient and revise the NLT arrival time as appropriate.

Q4: We have two facilities and need to ship a Category 2 quantity of radioactive material from one facility across town to the other. Do we still need to "coordinate" an estimated and an NLT arrival time, even though we're coordinating with ourselves?

A4: If the licensee's shipping and receiving facilities operate under different licenses and if the licensee is using a commercial carrier to transport the material, coordination is required as in all cases involving different licensees. If the licensee's transferring and receiving facilities are operating under the same license and if the licensee is providing its own transportation, coordination with the receiving facility is not required. However, the licensee may want to consider some elements of coordination, such as having the shipping facility notify the destination facility of the shipment's departure and its estimated arrival time, if it believes that such coordination might be prudent because, for example, the two facilities are separated by property or roads that are not under its control.

Q5: We are part of a university and plan to ship a Category 2 quantity of radioactive material from one facility to another on the same campus. Do we still need to coordinate an estimated and NLT arrival time between the two onsite facilities? What if the two facilities operate under different licenses?

A5: Facilities on the same site that operate under the same license do not need to coordinate even if the facilities are not at contiguous locations and even if the material has to cross or travel on a public road that crosses the site. However, if the shipping and receiving facilities are different licensees, they must coordinate the estimated and NLT arrival time because possession of the material will be transferred from one licensee to another.

Q6: Does an industrial radiographer carrying a camera containing a Category 2 quantity sealed source have to coordinate under this section to transport the source from a company site to a temporary jobsite or from one temporary jobsite to another?

A6: A licensed industrial radiographer is not subject to these coordination requirements for either kind of shipment because the radiographer is required to maintain control of a mobile source at all times, and transfer of the source from one licensee to another at the company site or at either of the temporary jobsites does not occur.

Q7: What types of records are required to document coordination activities?

A7: The last sentence of this subsection requires a licensee to "document the coordination activities" required to coordinate the shipment NLT arrival time and the expected shipment arrival with the receiving licensee. The shipping licensee should document any phone conversations or e-mail correspondence with the receiving licensee, including the names of the individuals participating in the calls or correspondence and the agreed-upon estimated arrival time and NLT arrival time. The licensee may print or store e-mails electronically, and it should maintain a copy of any facsimile and the confirmation information.

Q8: Am I allowed to use the National Source Tracking System (NSTS) as a method to fulfill the preplanning and coordination requirements of 10 CFR 37.75(b)?

A8: No. Although the NSTS is used, among other things, to track transfers of radioactive materials that are subject to the reporting requirements in Appendix E, "Nationally Tracked Source Thresholds," to 10 CFR Part 20, the NSTS is not designed for the kind of detailed interactions that are necessary for effective preshipment planning and coordination. For example, the NSTS does not track estimated or NLT arrival times; it tracks only the dates of estimated and actual arrivals. Reporting is not required until after the transfer has been made. This deadline alone makes the NSTS inappropriate for determining when and whether to begin tracing a missing shipment. In addition, the NSTS does not require the reporting of shipments that include bulk material or that comprise several Category 3 quantities that add up to a Category 2 quantity. Thus, the NSTS does not cover all shipments that are subject to 10 CFR Part 37 requirements.

§ 37.75, "Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of Radioactive Material" (continued)

§ 37.75(c)

Each licensee who receives a shipment of a category 2 quantity of radioactive material shall confirm receipt of the shipment with the originator. If the shipment has not arrived by the no-later-than arrival time, the receiving licensee shall notify the originator.

EXPLANATION:

The receiving licensee must confirm receipt of a shipment with the shipping licensee. The receiving licensee must also notify the shipping licensee if the shipment has not arrived by the NLT arrival time.

Q&As:

Q1: When must the receiving licensee confirm to the shipping licensee that the shipment has arrived?

A1: For a Category 2 quantity, the receiving licensee should strive to notify the shipping licensee as soon as practicable after the shipment has arrived. If the shipment arrives on time, confirmation by the delivery service (e.g., FedEx, DHL, or UPS) may be acceptable if the shipping and receiving licensees have agreed to this method during their preplanning and coordination discussions. It must, however, report that the shipment has not arrived by the agreed-upon NLT arrival time. The definition of NLT arrival time in 10 CFR 37.5 states that this interval may not be more than 6 hours after the estimated arrival time.

Q2: How should the receiving licensee notify the shipping licensee?

A2: The regulations in 10 CFR Part 37 do not specify a particular way for the receiving licensee to notify the shipping licensee. The receiving licensee may contact the shipping licensee by phone, e-mail, or facsimile. A recipient signing for receipt of a package through a carrier may not constitute confirmation of the receipt of the shipment unless the originator receives some form of notification of the receipt of the shipment. The licensee should decide on the method of notification that it will use during its preplanning and coordination activities.

Q3: Am I allowed to use the NSTS as a method to fulfill the requirements of 10 CFR 37.75(c) to confirm receipt of the Category 2 shipment and notify the shipping licensee if the shipment has not arrived by its NLT arrival time?

A3: No. Use of the NSTS will neither meet the requirement in 10 CFR 37.75(c) to notify the shipping licensee of the receipt of a shipment nor meet the requirement to report to the NSTS. A report to the NSTS is a report to a system; it does not notify the shipping licensee of the receipt of a source.

§ 37.75, "Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of Radioactive Material" (continued)

§ 37.75(d)

Each licensee, who transports or plans to transport a shipment of a category 2 quantity of radioactive material, and determines that the shipment will arrive after the no-later-than arrival time provided pursuant to paragraph (b) of this section, shall promptly notify the receiving licensee of the new no-later-than arrival time.

EXPLANATION:

If a shipment is delayed, the shipping licensee must notify the receiving licensee promptly of any new NLT arrival time.

Q&As:

Q1: How "promptly" must a Category 2 shipping licensee notify the receiving licensee if the NLT arrival time must be changed?

A1: The shipping licensee's notification should be as soon as practicable to avert a needless alarm by the receiving licensee under 10 CFR 37.75(c) when the shipment is not delivered by the originally established NLT arrival time. More specifically, notification should be as soon as practicable after the driver or other authorized member of the transfer crew determines that the Category 2 shipment in question cannot be safely expedited enough to arrive before the NLT arrival time. (The requirement for an NLT arrival time does not apply to shipments of Category 1 quantities of radioactive material.)

§ 37.75, "Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of Radioactive Material" (continued)

§ 37.75(e)

The licensee shall retain a copy of the documentation for preplanning and coordination and any revision thereof, as a record for 3 years.

EXPLANATION:

This text is self-explanatory.

Q&As:

Q1: What kinds of preplanning and coordination documents must a licensee retain to satisfy this recordkeeping requirement?

A1: For shipments of Category 1 quantities of radioactive materials, the regulation in 10 CFR 37.75(a)(3) requires licensees to document the preplanning and coordination activities described in 10 CFR 37.75(a)(1) and (a)(2). The shipping licensee should, therefore, document any phone conversations or e-mail communications that it has with the receiving licensee, including the names of the individuals participating in the call or e-mail communications, a general description of the shipment, and the departure and arrival times. In addition, the shipping licensee should document any interactions that it has with the Governor's designee, the names of the individuals participating in the call or e-mail, route-affected States' decisions on escorts, safe havens identified, and any other information that the licensee considers pertinent to document its compliance with the requirements in this subsection (see also Q3 and A3 for 10 CFR 37.75(a)). To document preplanning and coordination activities for shipments of Category 2 quantities of radioactive material, the shipping licensee needs only to retain records of the expected arrival time and NLT arrival time. The record should contain the receiving company's name and general information concerning the shipment (see also Q7 and A7 for 10 CFR 37.75(b)).

§ 37.77, "Advance Notification of Shipment of Category 1 Quantities of Radioactive Material"

§ 37.77

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.

EXPLANATION:

Licensees must notify the NRC and the Governor of any State (or the Governor's designee) in advance of a shipment of a Category 1 quantity of licensed material that passes through or across the boundary of the State.

Q&As:

Q1: What constitutes an "advance notification" for the purposes of this requirement?

A1: An "advance notification" is a communication to the NRC and the Governor (or Governor's designated official) of an affected State that a shipment of a Category 1 quantity of radioactive material will be made into or within that State's jurisdiction on a set date at a best estimated time. The communication must be written, must follow the procedures in 10 CFR 37.77(a), and must contain the information specified in 10 CFR 37.77(b). The licensee may send the communication by mail, e-mail, or facsimile. Annex E, "Template for Advance Notifications of Shipments to the NRC of Category 1 Quantities of Radioactive Material under 10 CFR 37.77(b)," to this subpart provides an example of an advance notification template that would satisfy the NRC.

Q2: Are advance notifications required for any Category 2 shipments?

A2: No. Advance notifications are not required for shipments of Category 2 quantities of radioactive material unless the shipment falls within the scope of 10 CFR 71.97(b) or unless it is an export or import shipment that requires notification under 10 CFR 110.50(c).

Q3: Where does a licensee obtain contact information for the Governor's designee?

A3: A list of the contact information for the Governor's designees is published annually, typically in July or August, in the *Federal Register (FR)*. The NRC Web site at https://scp.nrc.gov/special/designee.pdf also posts an updated list. Copies are available by contacting:

Director, Division of Materials Safety, Security, State, and Tribal Programs
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Q4: Whom must the shipping licensee notify?

A4: The licensee must notify the NRC and each State through which the shipment will pass, including the State of the destination. If an Agreement State agency issued the license, the licensee must notify that agency and each State through which the shipment will pass, including the destination State, and the NRC.

Q5: Does the NRC share advance notification information about a shipment with other agencies?

A5: Yes. When the NRC receives advance notification information, it may share the information with other affected Government agencies, such as DOT and DHS.

§ 37.77, "Advance Notification of Shipment of Category 1 Quantities of Radioactive Material" (continued)

§ 37.77(a), "Procedures for Submitting Advance Notification"

§ 37.77(a)(1)

The notification must be made to the NRC and to the office of each appropriate governor or governor's designee. The contact information, including telephone and mailing addresses, of governors and governors' designees, is available on the NRC's Web site at https://scp.nrc.gov/special/designee.pdf. A list of the contact information is also available upon request from the Director, Division of Materials Safety, Security, State, and Tribal Programs, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Notifications to the NRC must be to the NRC's Director, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The notification to the NRC may be made by email to RAMQC_SHIPMENTS@nrc.gov or by fax to 301-816-5151.

§ 37.77(a)(2)

A notification delivered by mail must be postmarked at least 7 days before transport of the shipment commences at the shipping facility.

§ 37.77(a)(3)

A notification delivered by any means other than mail must reach the NRC at least 4 days before the transport of the shipment commences and 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.

EXPLANATION:

Advance notifications of a shipment must be made in writing and postmarked 7 days before the shipment begins. Notifications 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 within or through the State.

Q&As:

Q1: Why does the mail notification requirement differ from that of other notifications?

A1: Mail delivery is not instantaneous; additional time is required to allow the mail notification to reach the appropriate party by the date required for other means of delivery. Under 10 CFR 37.77(a)(3), this delivery date is "at least 4 days before the transport of the shipment commences" for a notification to the NRC and "at least 4 days before transport of a shipment within or through the State" for a notification to a Governor or Governor's designee. To ensure the on-time arrival of the notification, the licensee must send a mailed notification sufficiently

early—postmarked at least 7 days before the shipment commences—to allow the recipient to receive it when he or she would have received it if it were sent by other means, such as by facsimile or e-mail.

Q2: Does a licensee have to mail the advance notification via the U.S. Postal Service?

A2: No. A licensee is not required to use the U.S. Postal Service. It may use other delivery services, such as FedEx or UPS.

Q3: What "other means" of advance notification besides the U.S. Postal Service or a commercial delivery service would be acceptable under 10 CFR 37.77(a)(3)?

A3: A licensee may also fax or e-mail notifications. However, if the licensee uses a facsimile or e-mail for this purpose, it should first verify the correct facsimile number or e-mail address with the recipient. The licensee should also confirm receipt of the message with its intended recipient so that both parties will know if the information has gone to an unauthorized third party. Although an NRC licensee may use any of the delivery methods discussed above, the agency recommends e-mail for NRC notification because its Headquarters Operations Center is staffed 24 hours a day, 7 days a week, and it will be able to confirm receipt of the notification in short order.

§ 37.77, "Advance Notification of Shipment of Category 1 Quantities of Radioactive Material" (continued)

§ 37.77(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:

§ 37.77(b)(1)

The name, address, and telephone number of the shipper, carrier, and receiver of the category 1 radioactive material;

§ 37.77(b)(2)

The license numbers of the shipper and receiver;

§ 37.77(b)(3)

A description of the radioactive material contained in the shipment, including the radionuclides and quantity;

§ 37.77(b)(4)

The point of origin of the shipment and the estimated time and date that shipment will commence;

§ 37.77(b)(5)

The estimated time and date that the shipment is expected to enter each State along the route;

§ 37.77(b)(6)

The estimated time and date of arrival of the shipment at the destination; and

§ 37.77(b)(7)

A point of contact, with a telephone number, for current shipment information.

EXPLANATION:

This provision lists the information that must be provided in an advance notification of shipment.

Q&As:

Q1: What information must be included in an advance notification?

A1: Each licensee is expected to make a good-faith effort to provide all the information required by 10 CFR 37.77(b) available when it makes the initial advance notification. However, the licensee must provide any information that is not available at the time of the initial notification in a revised notification under 10 CFR 37.77(c)(1) as soon as the information becomes available but before the start of the shipment. Annex D provides an example of an advance notification template that would satisfy the NRC.

Q2: What if I don't have all the shipment information listed in this subsection? Should I make the notification with the information I have and provide the outstanding information when I'm able to obtain it?

A2: Yes. A shipping licensee may make the initial notification with the information available at that time. The licensee must provide the remaining information in a revision notice as soon as the information becomes available.

Q3: If I don't have all the shipment information listed in this subsection before the scheduled shipment, can I still ship on the date originally specified in my first advance notification, or must I delay until I can provide all the information?

A3: The licensee may ship the radioactive material on the date originally specified in its first advance notification if the only shipment information still missing is the exact quantity of radioactive material that will be shipped. Operating experience has shown that, in some cases, the exact quantity of radionuclides that will be shipped is the information that is most likely to be unknown until shortly before the shipment. However, before beginning the shipment, the shipping licensee must provide all of the information required by this subsection, including the quantity of material being shipped.

Q4: Must the "point of contact…for current shipment information" under 10 CFR 37.77(b)(7) be someone accompanying the shipment?

A4: No. The point of contact should, in fact, *not* be someone accompanying the shipment because communication to that person could be lost during an accident or security incident. The point of contact should be someone with access to the information on the shipment that is available at the movement control center, as it is defined in 10 CFR 37.5.

§ 37.77, "Advance Notification of Shipment of Category 1 Quantities of Radioactive Material" (continued)

§ 37.77(c), "Revision Notice"

§ 37.77(c)(1)

The licensee shall provide any information not previously available at the time of the initial notification, as soon as the information becomes available but not later than commencement of the shipment, to the governor of the State or the governor's designee and to the NRC's Director, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

§ 37.77(c)(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 immediately notify the NRC's Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001 of any such changes.

§ 37.77(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, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The licensee shall send the cancellation notice before the shipment would have commenced or as soon thereafter as possible. The licensee shall state in the notice that it is a cancellation and identify the advance notification that is being cancelled.

EXPLANATION:

The shipping licensee must notify each of the previously notified States and the NRC if the schedule for a shipment is revised or cancelled.

Q&As:

Q1: What should a licensee do if the shipment of a Category 1 quantity is cancelled?

A1: If the shipment is cancelled, the shipping licensee must notify the States to which the initial advance notice had been sent and the regulatory agency (the NRC or Agreement State agency) with jurisdiction in the State of origin of the shipment. Notifications to the NRC may be made by e-mail to RAMQC_SHIPMENTS@nrc.gov or by fax to 301-816-5151.

Q2: What should a licensee do if the shipment schedule of a Category 1 quantity is revised?

A2: If the shipment schedule is revised, the shipping licensee must notify the States to which the initial advance notice had been sent, the States that the shipment is scheduled to enter for

the remainder of its itinerary, and the regulatory agency (the NRC or Agreement State agency) with jurisdiction in the State of origin that the shipment is scheduled to enter for the remainder of its itinerary. Notifications to the NRC may be made by e-mail to RAMQC_SHIPMENTS@nrc.gov or by fax to 301-816-5151.

Q3: Under 10 CFR 37.77(c)(2), how "promptly" must a Category 1 shipping licensee notify the Governor of the State or the Governor's designee of any changes in the shipment information provided in the first advance notification or any new information not previously available?

A3: The shipping licensee should notify any affected State's Governor or designee without delay. More specifically, assuming that there is no change in the names, addresses, or telephone numbers of the shipper, carrier, or receiving licensee and no change in the shipping or receiving licensees' license numbers, the shipping licensee should notify any affected State's Governor or designee as soon as it discovers or is advised of the following changes:

- A change is made in the description of the radioactive material that will be shipped, including the radionuclides or quantity.
- A change is made in the shipment's point of origin or estimated time or date of commencement.
- A change is made in the estimated time or date that the shipment is expected to enter each State along the route. For example, notification of a 6-hour delay in the estimated entry time should be made; however, notification of a 15-minute delay is not necessary.
- A change is made in the estimated time or date of arrival of the shipment at the destination. For example, notification of a 6-hour delay should be made; however, notification of a 15-minute delay is not necessary.
- A change is made in the name or telephone number of the point of contact for current shipment information.

Notification of any changes in shipment information enroute should take place as soon as the driver or other authorized member of the transfer crew determines and informs the movement control center of a change in this information. Prompt notification of significant schedule changes is particularly important if a State plans to provide an escort for the shipment.

Q4: Under 10 CFR 37.77(c)(2), the licensee must also notify the NRC "immediately." Is there a meaningful difference between notifying a Governor or Governor's designee "promptly" and notifying the NRC "immediately"?

A4: No. The NRC considers the words to be interchangeable for the purposes of 10 CFR Part 37.

Q5: What mechanism should a licensee use to notify the States and the NRC of revisions or changes in the shipment information?

A5: The rule does not specify a mechanism for notifying the States and the NRC of revisions or changes in the shipment information except for cancellations. Each licensee therefore may

use the method that works best for it. For cancellations, the licensee must "send a cancellation notice." E-mailed, faxed, or written correspondence is acceptable. The States and the NRC must receive the cancellation notice before the shipment begins or as soon as possible after it starts to provide time for a State to cancel any planned escorts. A telephone call sometimes may be necessary to ensure timely receipt of the notice.

Q6: Why do I have to notify the Governors or their designees and the NRC under 10 CFR 37.77(c)(2) if information about the shipment changes during the shipment?

Q6: The notification to Governors allows States to be aware of shipments in their jurisdictions, to provide escorts if they consider them necessary, and to respond to any incidents that require a State response. The notification to the NRC provides information that allows the NRC and other Federal agencies to respond in the event of an incident.

Q7: Other than the requirement to notify the NRC of any revision or changes to the advance notification, are any other notifications required?

A7: No. However, one voluntary good practice would be helpful—that is, to notify the NRC of the shipment's actual arrival or departure times if these differ from the original advance notification. As noted above in Q5 and A5 for 10 CFR 37.77, the NRC shares information about shipments of Category 1 quantities of radioactive material with other Federal Government agencies, such as DOT and DHS. Confirmation of actual shipment departure and arrival dates would enable the NRC staff to provide more accurate data for the tracking and current status of these shipments without having to make assumptions or without having to contact the shipper by telephone to get updates. Notification to the NRC within 24 hours of the actual departure and arrival dates should be sufficient for this purpose.

§ 37.77, "Advance Notification of Shipment of Category 1 Quantities of Radioactive Material" (continued)

§ 37.77(e), "Records"

The licensee shall retain a copy of the advance notification and any revision and cancellation notices as a record for 3 years.

EXPLANATION:

This text is self-explanatory.

Q&As:

Q1: For purposes of this record retention requirement, what constitutes a "revision" of an advance notification? Do I have to retain records of revisions for typos?

A1: The licensee should retain a record of any notification revision that it considered important enough to send to the NRC and the affected State. For example, the licensee should consider an error in one of the digits for a shipment date or time to require a revision of the initial notification. The licensee therefore would retain this type of revision. However, the licensee would not need to issue a revised notification to correct a misspelling of a common word if the misspelling does not have the potential to cause confusion.

Q2: When does the 3-year clock start for the required retention of an advance notification document?

A2: The licensee should start the document retention period on the date that it sent the notification.

Q3: If I have to cancel a planned shipment by phone to ensure that I give the NRC or State official notice as soon as possible, how should I document that phone call?

A3: If the licensee has to provide a revision or cancellation notification by telephone to the NRC or State official, it should record the date and time of the call, the name of the caller, the name of the person called, and the purpose of the call (revision or cancellation). To meet the requirement to "retain a copy" of these revision and cancellation notices, the licensee should keep this documentation of the conversation in electronic or hardcopy form for 3 years after the date of the call. The NRC encourages the licensee to notify the agency by e-mail.

§ 37.77, "Advance Notification of Shipment of Category 1 Quantities of Radioactive Material" (continued)

§ 37.77(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 § 37.43(d) of this part.

EXPLANATION:

Schedule information for shipments of Category 1 quantities of radioactive material is considered to be sensitive, and anyone receiving the information must protect it in accordance with 10 CFR 37.43(d).

Q&As:

Q1: What do I need to do, if anything, to ensure that those to whom I provide shipment schedule information comply with 10 CFR 37.43(d) requirements to protect it?

A1: The NRC recognizes that licensees have no control over the use or misuse of this information by persons whom they are required to notify. Licensees should inform the individuals that the information is not releasable to the public and should be protected from unauthorized disclosure. Accordingly, the NRC or an affected Agreement State agency will not hold a licensee responsible for the compliance of others.

§ 37.79, "Requirements for Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material during Shipment"

§ 37.79(a), "Shipments by Road"

§ 37.79(a)(1)

Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a Category 1 quantity of radioactive material shall:

§ 37.79(a)(1)(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.

§ 37.79(a)(1)(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.

§ 37.79(a)(1)(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.

§ 37.79(a)(1)(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.

EXPLANATION:

These provisions establish the security requirements for shipping Category 1 quantities of radioactive material by road.

Q&As:

Q1: When is the use of a movement control center necessary under 10 CFR 37.79(a)(1)?

A1: To meet the requirements in 10 CFR 37.79(a)(1)(i), any licensee that ships Category 1 quantities of radioactive material by road must either establish or use a carrier that has established movement control centers that maintain position information from a location remote from the transport vehicle or trailer. The control centers would be required to monitor shipments on a continuous and active basis 24 hours a day, 7 days a week, and must have the ability to communicate immediately in an emergency with the appropriate law enforcement agencies.

The movement control center must provide positive confirmation of the location of the shipment, its status, and the individuals who are in control of the shipment, and it must 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 include the identification of, and contact information for, the appropriate LLEA along the shipment route.

Q2: What is meant by “active” monitoring?

A2: A movement control center is monitoring on an active basis whenever it employs a method for tracking a shipment that provides the capability for the control center operators to be immediately aware if a shipment has deviated from the shipping plans. For example, the movement control center must have the capability to be immediately aware if (1) the shipment deviates from the planned route, (2) any unscheduled stops occur, or (3) any scheduled stopstake longer than expected.

Q3: Where can the movement control center be located? Does it need to be on the licensee’s property?

A3: The movement control center may be located at either the licensee’s or a third party’s site; however, it must be a stationary facility, not a mobile vehicle. Regardless of location, the movement control center must be able to monitor the Category 1 shipment at all times and to communicate with appropriate law enforcement agencies if necessary.

Q4: Why are redundant communications necessary, and what must these redundant devices or systems be able to do under 10 CFR 37.79(a)(1)(ii)?

A4: Redundant communications must mitigate an interruption caused by either natural events, such as storms, or deliberate actions, such as signal jamming, that may cause communications to be lost on the primary communication device. One or more additional communication devices must be available to operate independently from the primary device, thereby minimizing the possibility that whatever disabled the primary device will also affect the redundant devices. Redundant communications must be in place at all times to allow the transport vehicle to contact the movement control center and nearest LLEA if assistance is needed. The redundant communication method must not be subject to the same failure modes as the primary communication method. To meet this requirement, the licensee must ensure that the two systems do not rely on the same hardware or software (e.g., cell tower or proprietary network) to transmit their signal.

While an escort vehicle is not required, if used by the licensee, an escort vehicle must be able to communicate with both the transport driver and the movement control center.

Q5: What is a "telemetric position monitoring system" under 10 CFR 37.79(a)(1)(iii)?

A5: A "telemetric position monitoring system" is a data transfer system that captures, by instrumentation or other measuring devices, information about the location and status of the shipment (i.e., transport vehicle and/or package) between the departure and destination locations. The gathering of this information permits the remote monitoring and reporting of the location of a transport vehicle or package. Systems that use radiofrequency identification or satellite-based global positioning technologies are examples of telemetric position monitoring systems.

Q6: Is a global positioning system (GPS) required?

A6: No, although GPS would be considered an acceptable method. For Category 1 material, continuous and active monitoring of shipments is required without regard to the technology that provides these capabilities. Continuous and active monitoring means that at any time while the shipment is enroute, the licensee must know the shipment's location. Not specifying a particular technology gives the licensees flexibility to design a continuous and active monitoring system that meets their unique circumstances.

Q7: When is a second individual needed for the shipment under 10 CFR 37.79(a)(1)(iv)?

A7: The licensee must provide an accompanying individual for the shipment when 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 (see 49 CFR Part 395, "Hours of Service of Drivers"). This security measure provides reasonable assurance that the material will be protected from theft or diversion when it is stationary and in emergency situations in which the driver must stop or leave the vehicle. The accompanying individual may be another driver.

Q8: What should the driver and a second accompanying individual do during the shipment of a Category 1 quantity?

A8: The driver or the accompanying individual, or both, should periodically call the movement control center to provide a verbal status of the shipment and delivery. Each individual should maintain constant visual surveillance of the surrounding environment during transport. If the driver requires a break and stops the transport vehicle, either the driver or the accompanying individual should maintain constant visual surveillance of the immediate environment of the transport vehicle while it is not in motion. At least one of the individuals should periodically walk around the transport vehicle while it is not in motion to help confirm that there are no apparent safety- or security-related issues associated with the vehicle. In addition, the periodic walk-around should include visual surveillance of the surrounding area to confirm that there is no evidence of tampering with the contents of the vehicle or no unusual or suspicious activity in the immediate vicinity. The accompanying individual should undertake the communication and surveillance measures discussed above if the driver is sleeping during the break.

§ 37.79, "Requirements for Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material during Shipment" (continued)

§ 37.79(a)(1) "Shipments by Road" (continued)

§ 37.79(a)(1)(v)

Develop written normal and contingency procedures to address:

§ 37.79(a)(1)(v)(A)

Notifications to the communication center and law enforcement agencies;

§ 37.79(a)(1)(v)(B)

Communication protocols. Communication protocols must include a strategy for the use of authentication codes and duress codes and provisions for refueling or other stops, detours, and locations where communication is expected to be temporarily lost;

§ 37.79(a)(1)(v)(C)

Loss of communications; and

§ 37.79(a)(1)(v)(D)

Responses to an actual or attempted theft or diversion of a shipment.

§ 37.79(a)(1)(vi)

Each licensee who makes arrangements for the shipment of category 1 quantities of radioactive material shall ensure that drivers, accompanying personnel, and movement control center personnel have access to the normal and contingency procedures.

EXPLANATION:

These provisions require the use of written normal and contingency procedures for shipping Category 1 quantities of radioactive material by road.

Q&As:

Q1: Under 10 CFR 37.79(a)(1)(v), each licensee that makes arrangements for the shipment of Category 1 quantities of radioactive material must develop written "normal" and "contingency" procedures. How do I decide what I should address in my "normal" procedures and what should go into my "contingency" procedures?

A1: Normal operating procedures should describe activities conducted to meet regulatory requirements that would apply under expected routine operating conditions. Examples of such activities include refueling and comfort stops, meal stops, and a routine check-in.

Contingency procedures should identify issues that could interfere with compliance during the preparation for transport or during the actual transport of the radioactive material. Examples of such interference include bad weather, suspicious activities, mechanical breakdown, road or bridge closures, detours, accidents, and acute illness. Contingency procedures should address appropriate actions for both anticipated aberrant situations and those that licensees have previously encountered during the transport of radioactive material or storage incident to transport.

Q2: According to 10 CFR 37.79(a)(1)(v)(A), my procedures for Category 1 shipments must address "notifications to the communication center and law enforcement agencies." What kind of events must I develop notifications for, and what means of communications must I use (e.g., satellite phone, cell phone, e-mail, text messaging, or two-way radio)?

A2: The licensee's procedures must address notifications for all normal and contingency conditions covered by the procedures. The licensee should coordinate with its transporter to make certain that a system is in place to ensure immediate communication to summon help in an emergency.

Q3: The regulation in 10 CFR 37.79(a)(1)(v)(B) requires me to develop communication protocols for Category 1 shipments that, among other things, include "a strategy for the use of authentication codes and duress codes and provisions for refueling or other stops, detours, and locations where communication is expected to be temporarily lost." What are acceptable methods for authentication and duress codes and acceptable technologies for applying them?

A3: An acceptable protocol may use a number of methods and technologies or combinations of them for duress and authentication codes. The rule does not specify which methods and technologies to use because the best strategy may differ from licensee to licensee.

However, in choosing a strategy for authentication and duress codes, a licensee should consider the purpose of each. The purpose of an authentication code is to enable a licensee to confirm that the radioactive material remains in the physical possession of an authorized employee of the licensee or carrier or an authorized representative of the NRC, an Agreement State agency, or an LLEA. The purpose of a duress code is to enable the individual to confirm they are being forced to provide false information when responding to the licensee or communication center.

For example, to frustrate any attempt by an unauthorized individual to delay an investigation or to call off an ongoing recovery effort prematurely, the licensee should be able to confirm through its preestablished authentication protocol the true identity of the employee, regulatory agency representative, or law enforcement officer reporting from an offsite location. This authentication may be accomplished by using an agreed-upon separate radiofrequency or alternative communication method, by asking the caller to appear before a video camera on the vehicle to display a photo identification badge, by asking for the correct answer to one or more agreed-upon questions, or by using a combination of these methods.

Questions should require specific responses that are either of a personally distinguishing nature (e.g., the name of a first pet) or otherwise not so intuitively obvious that an adversary could infer the correct response. Similarly, the licensee or carrier may use one or several of these techniques in combination in a preestablished protocol or code word or phrase to signal that the driver or accompanying individual is under duress (e.g., at gunpoint or within lethal range of an

explosive). The duress code should permit the driver or accompanying individual to introduce the code on his or her own initiative without prompting, and it may involve seemingly mission-related technical questions and answers, apparently offhand remarks, or some other conversational technique. The purpose of the duress code should be to enable the offsite individual to signal without arousing suspicion that he or she is making a false report under threat by an adversary who is not visible or who is obviously malevolent to licensee or call center personnel.

Q4: Under 10 CFR 37.79(a)(1)(v)(C), my communications protocols for Category 1 shipments must address "loss of communications." What constitutes such a "loss of communications"? A loss of a minute's duration? A loss of a half-hour? One dropped call? Two or more dropped calls? Would static be considered "a loss of communication"?

A4: The NRC considers a loss of communication to be any curtailment in the availability of, impairment in the timeliness of, or degradation in the clarity of a message such that the intended recipient of the message is unable to understand it or to receive it when needed. Only a shipping or receiving licensee, a movement control center operator, or a transport crew can determine what constitutes a loss of communications in the context of the importance and urgency of the message for safe and secure delivery of the material. Therefore, the rule leaves this determination to those who are best able to make such a determination under the operating conditions during the shipment. These conditions necessarily frame any decision on when to switch from the primary to an alternate communications system.

To determine what should be considered a loss of communication, the licensee should identify foreseeable normal and contingency scenarios and should consider their likely urgency in deciding how many times the communications center, driver, or escort should try to restore the primary means of communication before resorting to the secondary means. For example, in an accident or a security emergency, there should be no delay in resorting to the secondary means of communication. The protocol should also allow the communicator to consider the severity of static and the perceived urgency of the situation in determining the extent to which the degradation of communication clarity justifies switching to the alternate communication technology.

Q5: As a shipper of Category 1 quantities under 10 CFR 37.79(a)(1)(vi), I have to "ensure" that drivers, accompanying personnel, and movement control center personnel have access to the normal and contingency procedures. How do I "ensure" that drivers, transport crew members, and movement control center staff have adequate access? If I give them hardcopies of the protocols, am I in violation if one of them loses the hardcopy and forgets to replace it before an inspection?

A5: The NRC understands that limits exist on the extent to which a licensee can "ensure" that drivers, transport crew members, and movement control center staff actually use the licensee's procedures for normal and contingency conditions. However, a licensee can take certain measures to demonstrate compliance with the requirement to "ensure" that these individuals "have access" to these procedures. Possible measures could include requiring (in the shipping contract) that the carrier's driver, the accompanying individual, and the movement control center staff sign a statement before the start of the shipment that they possess a copy of these procedures and have read them. Another measure could include another clause in the shipping contract with a similar signoff procedure that requires the driver to keep a copy of the procedures in the glovebox or in another readily accessible location inside the vehicle.

The licensee could also offer and encourage the training of the carrier's employees who are responsible for Category 1 shipments in the shipping licensee's procedures. In addition, the shipping licensee could deliver the procedures to the carrier's movement control center using a commercial delivery service before the first shipment and could retain a receipt for documentation.

§ 37.79, "Requirements for Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material during Shipment" (continued)

§ 37.79(a)(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.

§ 37.79(a)(3)

Each licensee who delivers to a carrier for transport, in a single shipment, a category 2 quantity of radioactive material shall:

§ 37.79(a)(3)(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.

§ 37.79(a)(3)(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

§ 37.79(a)(3)(iii)

Use carriers that have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

EXPLANATION:

These provisions establish security requirements for shipping Category 2 quantities of radioactive material by road.

Q&As:

Q1: I possess a Category 2 quantity of radioactive material and transport it without using a commercial carrier service. What are the physical protection requirements for road shipments of these quantities of material?

A1: A licensee that does not use a commercial carrier and that itself transports Category 2 or greater quantities of material by road must meet the requirements in 10 CFR 37.79(a)(2). To comply with 10 CFR 37.47(a), the licensee must establish a security zone around the

radioactive material and may use the transport vehicle as the security zone boundary. The regulation in 10 CFR 37.47(c) requires the licensee to limit access to the security zone to authorized individuals. In addition, the regulations in 10 CFR 37.49 require the licensee to monitor, detect, assess, and respond to any unauthorized access. The licensee will also need to comply with the preplanning and coordination requirements in 10 CFR 37.75 and with the investigation and reporting requirements in 10 CFR 37.81 if a shipment is lost. For those shipments of Category 2 quantities of radioactive material that meet the criteria in 10 CFR 71.97(b), the shipping licensee must also comply with the advance notification provisions of that section.

Q2: What requirements must I meet when I deliver a Category 2 quantity of radioactive material to a carrier to ship in a single shipment?

A2: The regulation in 10 CFR 37.79(a)(3)(i) requires the licensee to use a carrier that has an established, documented package tracking system that reliably enables it, as the shipping licensee, to know the last location of the package, the time that it was at that location, and the time that it should arrive at the next control point. To meet this requirement, the carrier's tracking system should enable the licensee to see the chain of custody for the package at each stage of the trip so that the licensee or the carrier can promptly determine if the shipment is lost or missing. The tracking system must also require an authorized signature before the release of the package for delivery or return.

The regulation in 10 CFR 37.79(a)(3)(iii) requires the licensee's carrier to maintain constant control and surveillance during transit and to have the capability to summon an armed LLEA response or other emergency or urgent assistance immediately when necessary.

Q3: If I'm not using an established nationwide delivery system like DHL Express, FedEx, or UPS, what can I do to ensure that my carrier has the equivalent tracking capabilities?

A3: The licensee should ascertain in advance if the carrier maintains a package tracking system with a reliable on-demand capability to ascertain the last location and current status of the shipment. If the licensee's carrier does not have such a capability, the licensee must either require it as a condition for shipment or find another carrier that meets the requirements in 10 CFR 37.79(a)(2) and 10 CFR 37.79(a)(3) and other applicable provisions of this part.

Q4: What must a package control system for a Category 2 shipment be able to do to "maintain constant control and/or surveillance"? Would I be in violation if there are any lapses or interruptions?

A4: The regulation in 10 CFR 37.79(a)(3)(i) clarifies the performance requirements for "constant control and/or surveillance" by stating that, for a package tracking system to maintain these capabilities, the system "must allow the shipping licensee or transporter to identify when and where the package was last and when it should arrive at the next point of control." Thus, although the licensee should take all reasonable measures to prevent or minimize tracking system malfunctions, it will not be in violation if the carrier's package control system is not able to pinpoint the location of the shipment moment by moment in real time.

Q5: According to 10 CFR 37.79(a)(2), I'm required to maintain constant control and/or surveillance "during transit." When does "transit" begin and end for the purposes of this requirement?

A5: In general, transit begins when the organization with physical control over the material begins to move it off site. Unless the licensee itself takes the material off site to the carrier for shipment, transit begins when the carrier accepts the consignment of radioactive material for shipment and begins moving the loaded transport vehicle. Transit ends when the receiving licensee accepts the shipment from the carrier and unloads or allows the radioactive material to be unloaded at the agreed-upon destination.

Q6: What kind of equipment must I use to "have the capability for immediate communication" under 10 CFR 37.79(a)(2) to summon help? Satellite phones? Cell phones? Laptops for e-mails? Text messaging? Two-way radios?

A6: The rule does not specify any particular communications technology. The licensee or carrier must ensure that its chosen technology permits "immediate communication to summon appropriate response or assistance," the same as under 10 CFR 37.79(a)(3)(ii).

Q7: Do I have to have a backup communications system to maintain the capability for "immediate communication"?

A7: A backup system is not required for transfers of Category 2 quantity shipments. However, such a system could provide greater assurance that the licensee or carrier will be able to maintain its capability for immediate communication in the event of a malfunction or damage to the primary communications system.

Q8: What's the difference between "response" and "assistance"?

A8: The regulations in 10 CFR Part 37 generally use the word "response" to denote a response by law enforcement personnel to an apparent or actual security event or a response by trained emergency services personnel to prevent or mitigate any collateral safety impacts of a security event. The regulations in 10 CFR Part 37 use "assistance" to denote other kinds of emergency or urgent conditions under which the transport crew or vehicle(s) requires outside help, such as towing or roadside repair service, to avoid or minimize an unplanned delay in the shipment. The NRC has used both words in 10 CFR 37.79(a)(2) and (a)(3) to signify that the licensee or carrier must have the capability for immediate communications for both security- and nonsecurity-related incidents.

Q9: Under 10 CFR 37.79(a)(3)(iii), licensees must use carriers with tracking systems that require an "authorized signature" before the package can be released for delivery or return. How will I know that an individual who signs the shipping papers for a package is "authorized"?

A9: The individual should be an employee or contractor of the receiving licensee. Because that individual is subject to reassignment and may be unknown to the licensee, as good practice, the licensee should request that the carrier ask for Government- or licensee-issued photo identification to verify the individual's identity and company-issued documentation to verify that the individual works for the receiving licensee or its contractor.

§ 37.79, "Requirements for Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material during Shipment" (continued)

§ 37.79(b), "Shipments by Rail"

§ 37.79(b)(1)

Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 1 quantity of radioactive material shall:

§ 37.79(b)(1)(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.

§ 37.79(b)(1)(ii)

Ensure that periodic reports to the communications center are made at preset intervals.

EXPLANATION:

These provisions establish the security provisions for shipping Category 1 quantities of radioactive material by rail.

Q&As:

Q1: What are the physical protection requirements for rail shipments of Category 1 quantities of radioactive material?

A1: The regulation in 10 CFR 37.79(b)(1)(i) requires licensees to ensure that rail shipments are monitored either by a telemetric position monitoring system or an alternative tracking system that meets certain criteria for reporting to a licensee, a third party, or a railroad communications center. The communications center must provide positive confirmation of the shipment's status and location. Each center must also be prepared to implement preplanned procedures to respond to deviations from the authorized route, a notification of an actual or attempted theft or diversion of a shipment, or any suspicious activity near the shipment. The procedures must also identify and provide contact information for the appropriate LLEA in each jurisdiction 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. The regulation in 10 CFR 37.79(b)(1)(ii) requires the shipping licensee to ensure that the communications center makes periodic reports at preset intervals.

Q2: What is a telemetric position monitoring system?

A2: A telemetric position monitoring system is a data transfer system that captures, by instrumentation or by other measuring devices, information about the location and status of a shipment (i.e., transport vehicle or package) between the departure and destination locations. The gathering of this information permits the remote monitoring and reporting of the location of a transport vehicle or package. Systems that use radiofrequency identification or satellite-based global positioning technologies are examples of telemetric position monitoring systems.

Q3: What's the difference between a railroad communication center and a movement control center for transport by road?

A3: The two types of centers fulfill equivalent communications functions. The NRC refers to "railroad communication center" because that's the accepted railroad industry term for the railroad-related entity that carries out the functions that correspond to those of a movement control center.

Q4: Also under 10 CFR 37.79(b)(1)(i), the communications center must implement preplanned procedures in response to "deviations" from the authorized route. What constitutes a "deviation"?

A4: A "deviation" from the authorized route would be any redirection to another rail spur or rail line when the railroad communications center was not aware that the switch was to be made.

This could include a relocation of a train within a rail yard if the relocation could adversely affect the ability of the railroad to locate the shipment or to provide required security.

Q5: According to 10 CFR 37.79(b)(1)(ii), licensees must ensure that periodic reports to the communications center are made at preset intervals. What must I do if one of these reports is late? How long should I wait before acting?

A5: The licensee's shipment contract with the highway carrier or railroad should require its movement control or communications center to notify the licensee immediately if a call from its transport crew is delayed by more than half of the prearranged reporting interval. The licensee should contact the LLEA immediately if the movement control or communications center cannot establish communications with the transport crew.

§ 37.79, "Requirements for Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material during Shipment" (continued)

§ 37.79(b), "Shipments by Rail" (continued)

§ 37.79(b)(2)

Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 2 quantity of radioactive material shall:

§ 37.79(b)(2)(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.

§ 37.79(b)(2)(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

§ 37.79(b)(2)(iii)

Use carriers that have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

EXPLANATION:

This requirement establishes the security provisions for shipping Category 2 quantities of radioactive material by rail.

Q&As:

Q1: What are the physical protection requirements for rail shipments of Category 2 quantities of radioactive material?

A1: The regulation in 10 CFR 37.79(b)(2)(i) requires a licensee that is shipping Category 2 quantities of radioactive material by rail to have, at minimum, the capability to contact the shipping carrier and to determine the approximate location of the shipment. Such licensees must also use a carrier that has a package tracking system that allows the shipping licensee or carrier to identify when and where the package was when the train last reported and when it should arrive at the next point of control. The regulation in 10 CFR 37.79(b)(2)(ii) requires the carrier to maintain constant control and surveillance during transit and to have the capability for

immediate communication to summon an appropriate response or assistance. In addition, the carrier must, under 10 CFR 37.79(b)(2)(iii), require an authorized signature before releasing the package for delivery or return.

Q2: What must a package control system for a Category 2 shipment be able to do to "maintain constant control and/or surveillance"? Would I be in violation if there are any lapses or interruptions?

A2: The regulation in 10 CFR 37.79(b)(2)(i) clarifies the performance requirements for "constant control and/or surveillance" by stating that, to maintain these capabilities, the package tracking system must allow the shipping licensee or carrier "to identify when and where the package was last and when it should arrive at the next point of control." Thus, although the shipping licensee should take all reasonable measures to prevent or minimize tracking system malfunctions, the licensee will not be in violation if it is unable to pinpoint the location of the shipment moment by moment in real time.

Q3: According to 10 CFR 37.79(b)(2)(ii), I'm required to maintain constant control and/or surveillance "during transit." When does "transit" begin and end for the purposes of this requirement?

A3: Transit begins when the carrier accepts the consignment of radioactive material for shipment electronically or in writing and begins to move the loaded transport vehicle. Transit ends when the receiving licensee accepts the shipment from the carrier electronically or in writing and unloads or allows the radioactive material to be unloaded at the agreed-upon destination.

Q4: What kind of equipment does a carrier need to "have the capability for immediate communication" to summon help? Laptops for e-mails? Cell phones for text messaging? Two-way radios?

A4: The rule does not require any particular communications technology. The carrier has the discretion to choose the type of communications equipment that it will use to summon help under 10 CFR 37.79(b)(2). However, the carrier's chosen technology must permit communication without delay.

Q5: Does my carrier need to have a backup communications system to maintain the capability for "immediate communication"?

A5: A backup system is not required; however, such a system could provide greater assurance that the carrier will be able to maintain its capability for immediate communication in the event of a malfunction or damage to the primary communications system.

Q6: What's the difference between "response" and "assistance"?

A6: The regulation in 10 CFR Part 37 generally uses the word "response" to denote a response by law enforcement personnel to an apparent or actual security event or a response by trained emergency services personnel to prevent or mitigate any collateral safety impacts of a security event. The regulation in 10 CFR Part 37 uses "assistance" to denote a response to other kinds of emergency or urgent conditions under which the transport crew requires outside help, such as towing or on-location repair service, to avoid or minimize an unplanned delay in

the shipment. The NRC has used both words in 10 CFR 37.79(b)(2) to signify that the licensee or carrier must have the capability for immediate communications for both security- and nonsecurity-related incidents.

Q7: Under 10 CFR 37.79(b)(2)(iii), licensees must use carriers with tracking systems that require "an authorized signature" before the package can be released for delivery or return. How will I know that an individual who signs the shipping papers for a package is "authorized"?

A7: The individual should be an employee or contractor of the receiving licensee. Because that individual is subject to reassignment and may be unknown to the licensee, as good practice, the licensee should request that the carrier or railroad ask for Government- or licensee-issued photo identification to verify the individual's identity and company-issued documentation to verify that the individual works for the receiving licensee or its contractor.

§ 37.79, "Requirements for Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material during Shipment" (continued)

§ 37.79(c), "Investigations"

Each licensee who makes arrangements for the shipment of category 1 quantities of radioactive material shall immediately conduct an investigation upon the discovery that a category 1 shipment is lost or missing. Each licensee who makes arrangements for the shipment of category 2 quantities of radioactive material shall immediately conduct an investigation, in coordination with the receiving licensee, of any shipment that has not arrived by the designated no-later-than arrival time.

EXPLANATION:

The shipping licensee must investigate immediately if a Category 1 quantity shipment is lost or missing or if a Category 2 quantity shipment does not arrive by the NLT arrival time.

Q&As:

Q1: How should I decide that a shipment of my Category 1 quantity of radioactive material is lost or missing?

A1: If the carrier's telemetric position monitoring system or the railroad's communications center cannot tell where a licensee's shipment is within a few minutes after the licensee asks for the status of its shipment, and if the licensee is not confident that the tracking and communications systems are functioning normally, it should consider the shipment lost or missing. Additionally, if the licensee cannot reach the transport crew after a missed check-in, it should assume that the shipment is missing.

Q2: What should an investigation of a lost or missing Category 1 quantity shipment include?

A2: The scope of an investigation will depend on the circumstances of the lost or unaccounted for material, the shipment's transportation mode, and the contingency procedures. The licensee should coordinate its investigation with the carrier. The investigation should include, but not be limited to, the following actions:

- Determine the time and location of the last transport crew check-in.
- Determine where communication was lost.
- Determine where tracking was lost.
- Confirm that the equipment is working properly.
- Contact the escort if one was being used.

Q3: What should I do if my Category 2 shipment does not arrive by the NLT arrival time?

A3: If the licensee is a receiving licensee, it must notify the shipping licensee in accordance with 10 CFR 37.75(c). In addition, the receiving licensee should cooperate in the investigation that the shipping licensee is required to conduct. If the licensee is the shipping licensee, it must immediately begin an investigation to determine what happened to the shipment.

Q4: What should an investigation of a lost or missing Category 2 quantity shipment include?

A4: The shipping licensee should contact the carrier to determine the shipment's last known location. The shipping licensee should work with the carrier to determine the shipment's current location. If the carrier cannot determine the location of the shipment, the shipping licensee should contact the NRC Operations Center to inform it that a Category 2 shipment is lost or missing. The shipper should continue to work with the carrier to locate the shipment; however, if the shipment is still missing after 24 hours from the initial notification, the licensee again must contact the NRC Operations Center.

§ 37.81, "Reporting of Events"

§ 37.81(a)

The shipping licensee shall notify the appropriate LLEA and the NRC's 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(c), the shipping licensee will provide agreed upon updates to the NRC's Operations Center on the status of the investigation.

EXPLANATION:

The shipping licensee must notify the LLEA and the NRC Operations Center within 1 hour after determining that a shipment of Category 1 quantities of radioactive material is lost or missing.

Q&As:

Q1: When must a licensee make a notification that a Category 1 shipment is lost or missing?

A1: When a licensee determines that a shipment of a Category 1 quantity of radioactive material is lost or missing, it must notify the LLEA in the area of the shipment's last confirmed location within 1 hour and must then notify the NRC Operations Center. Notification to the NRC should be as prompt as possible, but not at the expense of causing a delay or interference with the LLEA response to the event. Although 10 CFR 37.81(a) sets 1 hour as the maximum time for a "lost or missing" notification of a Category 1 quantity shipment, the licensee should notify the LLEA as soon as the carrier has completed its first unsuccessful attempt to locate the material and has confirmed that its inability to trace the material was not a result of human error or a malfunction of the system for monitoring the position of the shipment.

Q2: How can I know when a Category 1 shipment is lost or missing?

A2: The regulations in 10 CFR 37.79(a) require the licensee to ensure that shipments are continuously and actively monitored by a telemetric position monitoring system or an alternative tracking system that reports to a movement control center for road shipments. In addition, the licensee must ensure that movement centers provide positive confirmation of the location, status, and control over the shipment. For shipment by rail, the regulations in 10 CFR 37.79(b) require shipments to be 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 must provide positive confirmation of the location of the shipment and its status.

Thus, if the licensee complies with these requirements, it should have no trouble in readily ascertaining whether a Category 1 shipment is lost or missing. If the transport crew has not checked in at the required frequency or if the tracking system indicates that the shipment is not on the approved route and the licensee has not heard from the transport crew, the licensee should begin an immediate investigation to determine what is happening. If the licensee's

attempts to contact the transport crew are unsuccessful (using both the primary and backup communication systems), the licensee should assume that something is wrong and should report to the LLEA and the NRC.

Q3: How frequently should the licensee provide updates to the NRC Operations Center?

A3: The licensee should provide updates when it receives new information. In addition, the licensee should discuss with the NRC, on a case-by-case basis, how frequent the updates should be because the frequency will depend on the circumstances of the lost or missing shipment.

§ 37.81, "Reporting of Events" (continued)

§ 37.81(b)

The shipping licensee shall notify the NRC's 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's Operations Center.

EXPLANATION:

The shipping licensee must notify the NRC Operations Center within 4 hours of the determination that a shipment of Category 2 quantities of radioactive material is lost or missing and must call the center after 24 hours if the shipment has not been located.

Q&As:

Q1: When must a licensee make a notification that a Category 2 shipment is lost or missing?

A1: The concept of lost or missing licensed material is neither new nor unique to 10 CFR Part 37. In summary, if the licensee does not know where the material is and cannot readily locate it, it should consider the material lost or missing. The licensee is allowed reasonable time to attempt to trace a shipment. A licensee is not required to make the notification when a shipment has not arrived by the NLT arrival time, but the shipping licensee is required to begin its investigation then. If the investigation does not discover the location of the material, the licensee must notify the NRC. A licensee can take a reasonable amount of time to conduct the investigation; however, the investigation should not last several days. The licensee needs to use some judgment in making the determination that the investigation has taken long enough and that the NRC needs to be notified.

Once the licensee determines that the shipment is lost or missing, it must notify the NRC Operations Center within 4 hours of its determination. In addition, the licensee must immediately notify the NRC Operations Center if, after 24 hours from its determination that the shipment was lost or missing, it still cannot locate the material.

§ 37.81, "Reporting of Events" (continued)

§ 37.81(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's 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.

EXPLANATION:

The shipping licensee must notify the designated LLEA along the shipment route upon discovery of any actual or attempted theft or diversion of a shipment or upon discovery of suspicious activities related to a shipment of Category 1 quantities of radioactive material. After notifying the LLEA, the licensee must notify the NRC Operations Center.

Q&As:

Q1: This subsection requires me to notify an LLEA along the route as soon as possible "upon discovery" of any actual or attempted theft or diversion of a shipment or suspicious activities. Does this mean I must report whatever a member of the transport crew "discovers" as soon as he or she reports it without first trying to confirm whether it is what the individual thinks it is?

A1: No. However, the licensee should immediately assess whether the reported event or activity— or the signal that it received from an alarm or monitoring device—requires LLEA assistance without delay. For example, an explosion on or around the transport or escort vehicle, gunshots nearby in an urban or suburban area or other setting where hunting is prohibited, or the image of an armed individual on the licensee's or the carrier's monitoring screen would indicate the need for an immediate LLEA response and should be reported at once.

Q2: What would a licensee be required to do if there is an attempt to steal or divert a Category 1 shipment?

A2: For shipments of Category 1 quantities of radioactive material, a licensee that discovers, under 10 CFR 37.81(c), an actual or attempted theft or diversion of a shipment or any suspicious activity related to a shipment must notify the designated LLEA along the shipment route as soon as possible. After notifying the LLEA, the licensee must notify the NRC Operations Center at 301-816-5100. The NRC Operations Center will notify other affected States and the agency's Federal partners, as appropriate.

Q3: What types of activities should be considered "suspicious"?

A3: A number of activities may be considered suspicious. A list of possible suspicious activities includes the following:

- discovery of any unknown articles found in, on, or around company vehicles
- unauthorized persons photographing company vehicles or locations or both
- carriers being followed by other vehicles for extended periods of time
- carriers being asked inappropriate questions about the licensee's business related to security, products, delivery schedules, or any other information that seems suspicious
- reports or observations of commercial vehicles parked in unusual locations, such as fields, vacant warehouses, or other secluded areas
- unauthorized persons loitering in areas in which company vehicles are loading or unloading, parked, or serviced

The following related additional examples are provided for independent or owner-operated truck drivers:

- anyone who inquires too much about what the carrier is hauling, where it is going, or what the intended route is
- vehicles following the carrier for extended periods of time
- persons observing parking areas for trucks and automobiles repeatedly cruising through those areas
- requests to stop for alleged accidents or breakdowns that cannot be seen
- anyone approaching the carrier seeking a ride for himself or herself or for another person
- an unattended vehicle parked in or on critical infrastructure (e.g., a tunnel or bridge) or in a location that seems out of place
- anyone avoiding a security checkpoint
- obviously altered signage on a vehicle
- missing license plate(s) or other unique markings on a vehicle

For example, if the truck driver notices suspicious activity, he or she should proceed in accordance with the employer's established security policies and procedures. If the driver has any doubt about the suspicious behavior, he or she should report to his or her supervisor.

The lists above are not exhaustive; however, they provide examples of actions that could be considered suspicious. The licensee is responsible for evaluating activity to determine if it is suspicious.

§ 37.81, "Reporting of Events" (continued)

§ 37.81(d)

The shipping licensee shall notify the NRC's 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.

EXPLANATION:

The shipping licensee must notify the NRC upon discovery of any actual or attempted theft or diversion of a shipment or suspicious activities related to a shipment of a Category 2 quantity of radioactive material.

Q&As:

Q1: This subsection requires me to notify the NRC as soon as possible "upon discovery" of any actual or attempted theft or diversion or suspicious activities related to a shipment of a Category 2 quantity. Does this mean I must report whatever my carrier has "discovered" as soon as the carrier reports it without first trying to confirm whether it is what the carrier thinks it is?

A1: No. The regulation in 10 CFR 37.81(b) requires the licensee to 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. This timeframe should allow the licensee to gather sufficient information to decide if there actually have been suspicious activities or an actual or attempted theft or diversion.

Q2: What would a licensee be required to do if there is an attempt to steal or divert a Category 2 shipment?

A2: The regulation in 10 CFR 37.81(d) requires a licensee that discovers an actual or attempted theft or diversion of a Category 2 quantity shipment or any suspicious activity related to a shipment to notify the NRC Operations Center at 301-816-5100 as soon as possible, after notifying the applicable LLEA.

Q3: What types of activities should be considered "suspicious"?

A3: See Q3 and A3 for 10 CFR 37.81(c).

§ 37.81, "Reporting of Events" (continued)

§ 37.81(e)

The shipping licensee shall notify the NRC's 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.

EXPLANATION:

The shipping licensee must notify the NRC and the LLEA upon recovery of any lost or missing Category 1 quantities of radioactive material.

Q&As:

Q1: What constitutes "recovery" for purposes of this notification?

A1: The licensee can consider lost or missing licensed material recovered only when it is again in the physical possession of, or in a location otherwise under the control of, an authorized employee of the carrier, the shipping or recipient licensee, an authorized State or Federal agency, or an LLEA that is able to prevent or deter unauthorized access to the material.

Q2: How can I know that the individual reporting the recovery of a lost or missing Category 1 shipment is the person he or she says she is and not an adversary trying to trick me into calling off my search?

A2: To frustrate any attempt by an unauthorized individual to call off an ongoing recovery effort prematurely, the licensee should try to confirm the true identity of the employee, regulatory agency representative, or law enforcement officer who is reporting from an offsite location. If the vehicle has an onboard video camera, the licensee may accomplish this confirmation by asking the caller to appear before the camera and display a photo identification badge. If the vehicle does not have an onboard video camera, a licensee could confirm the identity of an employee by using its preestablished authentication code, by asking the employee to use an agreed-upon separate radiofrequency or alternative communication method, by asking for the correct answer to one or more agreed-upon identifying questions, or by using a combination of these. Questions should require specific responses that are either of a personally distinguishing nature (e.g., the name of a first pet) or otherwise not so intuitively obvious that an adversary could infer the correct response.

To confirm the true identity of a regulatory agency representative or law enforcement officer who claims to have recovered the lost or missing material in cases in which the vehicle does not have an onboard video camera to verify this claim, the licensee could ask the individual to describe the location and to wait with the material until additional law enforcement assistance arrives. If the individual says that his or her current location is unsafe, the licensee may ask for the address or distinguishing landmarks of the alternate location and tell the individual to wait for assistance at that location while it directs the nearest operating LLEA to the new location. If the individual claims to be a law enforcement officer, the licensee could ask the responding LLEA to verify the individual's employment or to refer the licensee to a number at which it can obtain

such verification. If the individual claims to be a regulatory agency representative, the licensee could look up or call information for the agency's toll-free number to verify his or her employment. The individual's responses to the licensee's requests for more information may not provide the positive identification that the licensee needs; however, incorrect or misleading information may signify that the individual is not the official he or she claims to be. If the licensee suspects a false identity, it should try to keep the individual on the phone and silently alert a colleague if possible (e.g., with a handwritten note) to contact the responding LLEA out of the caller's earshot. This might enable the LLEA to work with the phone service provider to identify more accurately the caller's current location and direction of travel.

The licensee or carrier should also use its pre-established duress code to confirm that an offsite interlocutor is not being forced (e.g., at gunpoint or within lethal range of an explosive) to submit a false report. The code should permit the offsite individual to introduce it on his or her own initiative without prompting and may involve seemingly mission-related technical questions and answers, apparently offhand remarks, or some other conversational technique to enable the offsite individual to signal without arousing suspicion that he or she is making a false report to licensee or call center personnel under threat by an adversary who is not visible or who is obviously malevolent. See also Q3 and A3 for 10 CFR 37.79(a)(1)(v)(B).

§ 37.81, "Reporting of Events" (continued)

§ 37.81(f)

The shipping licensee shall notify the NRC's Operations Center (301-816-5100) as soon as possible upon recovery of any lost or missing category 2 quantities of radioactive material.

EXPLANATION:

The shipping licensee must notify the NRC upon recovery of any lost or missing Category 2 quantities of radioactive material.

Q&As:

Q1: Should licensees make notification that a lost or missing Category 2 shipment has been found?

A1: Yes. The licensee must notify the NRC Operations Center when a lost or missing shipment of Category 2 quantities of radioactive material has been located. An Agreement State licensee notifies the Agreement State. This notification would be considered an update of the initial notification.

Q2: Can I notify the NRC Operations Center by any means other than telephoning?

A2: Yes. The licensee can fax a notification to the NRC Operations Center at 301-816-5151.

§ 37.81, "Reporting of Events" (continued)

§ 37.81(g)

The initial telephonic notification required by paragraphs (a) through (d) 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. A written report is not required for notifications on suspicious activities required by paragraphs (c) and (d) of this section. The report must set forth the following information:

§ 37.81(g)(1)

A description of the licensed material involved, including kind, quantity, and chemical and physical form;

§ 37.81(g)(2)

A description of the circumstances under which the loss or theft occurred;

§ 37.81(g)(3)

A statement of disposition, or probable disposition, of the licensed material involved;

§ 37.81(g)(4)

Actions that have been taken, or will be taken, to recover the material; and

§ 37.81(g)(5)

Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed material.

EXPLANATION:

The licensee must submit a written report to the NRC within 30 days of an initial report of lost or missing material or attempted or actual theft or diversion of a shipment of Category 1 or Category 2 quantities of radioactive material.

Q&As:

Q1: What level of detail should I provide in my 30-day written report on an event?

A1: The appropriate level of detail would depend on a number of considerations, including the nature and severity of the security incident, whether it was a first occurrence or a reoccurrence, and whether it has a significant potential to recur, the adequacy of the licensee's monitoring efforts, the timeliness of the initial detection, the accuracy of the assessment, and the timeliness and potential effectiveness of the measures implemented in response to the incident. In addition to an identification of corrective actions, the report should describe the data and analyses that support the licensee's identification of the root and significant contributing

cause(s) of the incident and should explain how these data and analyses support the licensee's selection of corrective actions identified. If the incident was a recurrence of a similar incident, the report should briefly describe past corrective actions and the findings of past assessments and should identify likely reasons that the past corrective actions did not prevent or mitigate a recurrence of the condition. The report should then explain the basis for the licensee's determination that the proposed new or revised corrective actions or changes in the licensee's implementation of these actions are likely to reduce the probability of a recurrence of the condition or to mitigate its effects.

§ 37.81, "Reporting of Events" (continued)

§ 37.81(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.

EXPLANATION:

After filing the 30-day report, the licensee must report any additional substantive information on the loss or theft within 30 days after it learns of such information.

Q&As:

Q1: What would be considered "additional substantive information"?

A1: Examples of additional substantive information would include information not previously reported to the NRC that has been gathered since the previous report. If the licensee could not complete its investigation within the 30-day limit for the initial report, the subsequent report would need to provide the final findings.

Q2: Would I have to report as "additional substantive information" something I "learned of" through TV, radio, or print news? Through Wikipedia or some other Internet source? From an LLEA representative?

A2: No. The licensee would not necessarily need to report as substantive information something that it learned through television, radio, print news, or Internet sources. The fact that information is available does not mean that the information is correct or that it would be of interest to the NRC. The information provided by an LLEA representative might be considered substantive, depending on the content. The licensee should use judgment in deciding if the information obtained from any source would be of interest to the NRC.

ANNEX E

TEMPLATE FOR ADVANCE NOTIFICATIONS TO THE NRC OF SHIPMENTS OF CATEGORY 1 QUANTITIES OF RADIOACTIVE MATERIAL UNDER 10 CFR 37.77(b)

Notification Date: _____ Notification Revision Number: _____

Shipping Identification (unique identifier): _____

Shipper (include name,* address,* and name of the point of contact and telephone number*):

Shipper's License Number* (and import or export license, when applicable): ____

Type of Shipment (circle one): domestic import export

Point of Origin* (include address and name of the point of contact and telephone number):

Recipient (consignee) (include name,* address,* name of the point of contact, and telephone number):

Recipient's License Number*: _____

Radioactive Isotope*: _____

Estimated Activity* (preferably in terabecquerel): __

Description of Shipment (e.g., physical form and number of sources or flasks or containers)*:

End Use of Shipment:

Carrier(s) (include name,* address,* and name of the point of contact, and telephone number*):

Planned Date* and Time* of Shipment Departure: _____

Confirmation of Shipment Actual Departure Date* and Time*: ____

Planned Date* and Time* of Shipment Arrival: ____

Confirmation of Shipment Actual Arrival Date* and Time*: _____

Routing Information:

Mode(s) of Transportation: _____

Estimated Time and Date That the Shipment Is Expected To Enter Each State along the Route*:

For Import/Exports Include Point(s) of U.S. Entry or Departure*: _____

Point of Contact, with a Telephone Number for Current Shipment Information*: _____

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* This symbol indicates information required by Title 10 of the *Code of Federal Regulations* (10 CFR) 37.77(b). The other items are voluntary but are requested by the U.S. Nuclear Regulatory Commission (NRC) to enable it to provide more accurate and detailed information for any emergency response.

Note that the preferred notification method to the NRC is through the Operations Center by e-mail or facsimile at least 4 days before the scheduled shipping date. The notification to the NRC may be made by e-mail to RAMQC_SHIPMENTS@nrc.gov or by fax to 301-816-5151. Shippers should coordinate with States as indicated in 10 CFR 37.77(a). The NRC asks that the shipper also notify the agency with a confirmation of the departure date within 1 day after the actual shipment departure and with a confirmation of the arrival date within 1 day after the actual arrival.

Under 10 CFR 37.77(c)(1), the licensee must provide any change in the shipment information supplied above to the States and the NRC as soon as the information becomes available but before the start of the shipment. Under 10 CFR 37.77(c)(2), the licensee must immediately notify the NRC Operations Center and the appropriate States of changes to the shipment schedule while the shipment is in transit.

SUBPART E—RESERVED

SUBPART F—RECORDS

§ 37.101, "Form of Records"

§ 37.103, "Record Retention"

§ 37.101, "Form of Records"

§ 37.101

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.

EXPLANATION:

Licensees are required to keep records that are legible for the length of the retention period.

Q&As:

These provisions are not unique to 10 CFR Part 37; therefore, no questions and answers are provided.

§ 37.103, "Record Retention"

§ 37.103

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. All records related to this part may be destroyed upon Commission termination of the facility license.

EXPLANATION:

Licensees are required to maintain records required by the regulations until the Commission terminates the license, unless the regulations specify a retention period.

Q&As:

Q1: If 10 CFR Part 37 does not specify how long to keep a record, is the licensee required to keep it? If so, for how long?

A1: If the regulations in 10 CFR Part 37 do not specify the length of record retention for a particular record, the licensee must retain the record under this section until the Commission terminates the facility license.

SUBPART G—ENFORCEMENT

§ 37.105, "Inspections"

§ 37.107, "Violations"

§ 37.109, "Criminal Penalties"

§ 37.105, "Inspections"

§ 37.105(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.

§ 37.105(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.

EXPLANATION:

The NRC has the right to inspect the licensee's facilities, including all licensee-maintained records that pertain to its receipt, possession, use, acquisition, import, export, or transfer of radioactive material.

Q&As:

These provisions are not unique to 10 CFR Part 37; therefore, no questions and answers are provided.

§ 37.107, "Violations"

§ 37.107(a)

The Commission may obtain an injunction or other court order to prevent a violation of the provisions of—

§ 37.107(a)(1)

The Atomic Energy Act of 1954, as amended;

§ 37.107(a)(2)

Title II of the Energy Reorganization Act of 1974, as amended; or

§ 37.107(a)(3)

A regulation or order issued pursuant to those Acts.

EXPLANATION:

The NRC may obtain a court order to stop someone from violating the regulations.

Q&As:

There are no Q&As for this section. The NRC Enforcement Manual (link contains additional information on the manual and related documents) is the implementing guidance for the agency's enforcement program. The NRC Enforcement Manual provides guidance consistent with the NRC Enforcement Policy (link contains additional information on the policy and related documents), which establishes the general principles that govern the enforcement program.

§ 37.107, "Violations" (continued)

§ 37.107(b)

The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

§ 37.107(b)(1)

For violations of—

§ 37.107(b)(1)(i)

Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended:

§ 37.107(b)(1)(ii)

Section 206 of the Energy Reorganization Act;

§ 37.107(b)(1)(iii)

Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

§ 37.107(b)(1)(iv)

Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

§ 37.107(b)(2)

For any violation for which a license may be revoked under Section 186 of the Atomic Energy Act of 1954, as amended.

EXPLANATION:

The NRC may obtain a court order to force someone to pay a civil penalty for violating the regulations.

Q&As:

There are no Q&As for this section. The NRC Enforcement Manual (link contains additional information on the manual and related documents) is the implementing guidance for the agency's enforcement program. The NRC Enforcement Manual provides guidance consistent with the NRC Enforcement Policy (link contains additional information on the policy and related documents), which establishes the general principles that govern the enforcement program.

§ 37.109, "Criminal Penalties"

§ 37.109(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 this 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.

§ 37.109(b)

The regulations in this 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.

EXPLANATION:

Anyone who willfully violates, attempts to violate, or conspires to violate the regulations can be criminally prosecuted.

Q&As:

There are no Q&As for this section. The NRC Enforcement Manual (link contains additional information on the manual and related documents) is the implementing guidance for the agency's enforcement program. The NRC Enforcement Manual provides guidance consistent with the NRC Enforcement Policy (link contains additional information on the policy and related documents), which establishes the general principles that govern the enforcement program.

APPENDIX A

CATEGORY 1 AND CATEGORY 2 RADIOACTIVE MATERIALS

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

Table 1—Category 1 and Category 2 Threshold

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.

RADIOACTIVE MATERIAL	CATEGORY 1 (TBq)**	CATEGORY 1 (Ci)	CATEGORY 2 (TBq)	CATEGORY 2 (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
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/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	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

Radioactive Material Thresholds

Table A-1. Category 1 and Category 2 Radioactive Material Thresholds*

* See the discussion below under “Calculations concerning multiple sources or multiple radionuclides.”

** The terabecquerel (TBq) values are the regulatory standard. The curie (Ci) values specified are obtained by converting from the terabecquerel values. The curie values are provided for usefulness only.

Calculations Concerning Multiple Sources or Multiple Radionuclides

The licensee must use the "sum-of-fractions" methodology to evaluate combinations of multiple sources or multiple radionuclides when determining if a location meets or exceeds the threshold and is thus subject to the requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material."

I. If multiple sources of the same radionuclide or multiple radionuclides are aggregated at a location, the licensee must determine the sum of the ratios of the total activity (in TBq) of each of the radionuclides to verify whether the activity at the location is less than the Category 1 or Category 2 thresholds in Table A-1, as appropriate. If the calculated sum of the ratios, using the equation below, is greater than or equal to 1.0, the relevant requirements of this part apply.

II. First, determine the total activity (in TBq) for each radionuclide from Table A-1. This determination is made by adding the activity of each individual source, the material in any device, and any loose or bulk material that contains the radionuclide. Then, use the equation below to calculate the sum of the ratios by inserting the total activity of the applicable radionuclides from Table A-1 in the numerator of the equation and the corresponding threshold activity from Table A-1 in the denominator of the equation. The licensee must perform the calculations in metric values (i.e., TBq); the numerator and denominator values must be in the same units.

EXPLANATION:

$$\sum_{1}^{n}\left[\frac{R_1}{AR_1}+\frac{R_2}{AR_2}+\ldots+\frac{R_n}{AR_n}\right]\geq 1.0,$$

Where:
R_1 = total activity for radionuclide 1
R_2 = total activity for radionuclide 2
R_n = total activity for radionuclide *n*
AR_1 = activity threshold for radionuclide 1
AR_2 = activity threshold for radionuclide 2
AR_n = activity threshold for radionuclide *n*

Appendix A to 10 CFR Part 37 establishes the thresholds for Category 1 and Category 2 radioactive materials.

Q&As:

See the Q&As on the definition of Category 1 and Category 2 radioactive materials in 10 CFR 37.5, "Definitions."

APPENDIX B

QUESTIONS AND ANSWERS CONCERNING THE APPLICATION OF 10 CFR PART 37 TO LICENSEES WITH 10 CFR PART 73 SECURITY PLANS

First Group of Questions from the Nuclear Energy Institute

The following are answers to questions from the Nuclear Energy Institute (NEI) on 10 CFR Part 37applies to nuclear reactors and other facilities with security plans under 10 CFR Part 73, "Physical Protection of Plants and Materials." They were made public on the NRC Web site at http://www.nrc.gov/security/byproduct/nei-pt-37.pdf and provided to NEI on October 9, 2013.

Q1: In the Federal Register, Volume 78, Number 53, page 16925, A. *General Applicability*, question number 3, when the NRC rescinds the orders for NRC licensees, will the orders be declassified from SGI-M at that time? Also will the declassification have an impact on Agreement State licensees that may have similar orders that are not rescinded at the same time? Will the NRC list the NRC orders that are being rescinded by 10 CFR Part 37 one year after the final publication date?

A1: The NRC staff proposed a direct final rule to the Commission (SECY-13-0045) that removed the SGI-M designation of security-related information. The direct final rule applies to any panoramic and underwater irradiator licensees that possess more than 370 TBq (10,000 Ci) of radioactive material, M&D licensees, and any licensee that transports small quantities of irradiated reactor fuel that weigh 100 grams or less in net weight or Category 1 quantities of byproduct material whether the facility is licensed by the NRC or an Agreement State. Irradiated fuel consists of spent fuel pellets, and does not include low levels of contamination on equipment, samples, or in low level waste.

The 10 CFR Part 37 rulemaking incorporates many of the security measures contained in the license conditions or orders received by licensees possessing Category 1 and Category 2 quantities of radioactive materials. Therefore, for NRC licensees, the increased controls license conditions and security orders were superseded by 10 CFR Part 37 on March 19, 2014, when NRC licensees were to be in compliance with the rule. For Agreement State licensees that received an NRC security order issued under NRC's common defense and security authority, the order remained in place until the effective date of compatible requirements issued by the Agreement State. All Agreement States were obligated to have 10 CFR Part 37 equivalent requirements issued by March 19, 2016. Once an Agreement State's compatible requirements became effective, security orders were rescinded, and Agreement State licensees were required to follow their respective State requirements.

Q2: In the Federal Register, Volume 78, Number 53, page 16927, A. *General Applicability*, question number 11, the reference to licensees in an Agreement State is applicable to 10 CFR Part 30 licensees and not 10 CFR Part 50 and 52 licensees whose license also authorizes use of 10 CFR Parts 30, 40, and 70 material. Please confirm since the Agreement States have three years to issue compatible requirements.

A2: The question asks when the final rule will be effective. NRC licensees were required to be in compliance with the final rule for 10 CFR Part 37 one year after its publication date which

was March 19, 2013. Therefore, if your possession of byproduct material is authorized by an NRC license, you were required to be in compliance with 10 CFR Part 37 by March 19, 2014.

The Agreement States were required to issue compatible requirements within 3 years of the publication date of the final rule (March 2016). If your possession of byproduct material is authorized by an Agreement State license, you must comply with the compatible requirements of that Agreement State on the date specified by the Agreement State.

Q3: In the Federal Register, Volume 78, Number 53, page 16925, A. *General Applicability*, question number does the NRC expect the reactor security plan required by 10 CFR Part 73 to include specific requirements related to radiography sources, Category 1 and 2 sources, etc.?

A3:[1] Security plans:

a. 10 CFR 37.11(b) provides that "any licensee's NRC licensed activities are exempt from the requirements of subparts B and C of this part to the extent that its activities are included in a security plan required by 10 CFR Part 73 of this chapter." Therefore, the licensee can choose to protect risk-significant (IAEA Category 1 and 2) byproduct material (hereafter referred to as risk significant byproduct material) using a 10 CFR Part 73 physical security plan approved by the NRC, or in a separate 10 CFR 37 security plan. If the licensee is using its 10 CFR Part 73 plan to secure materials, the licensee should document how they are protected against theft and diversion.

b. 10 CFR Part 73 Security Plans—If a licensee chooses to protect the material using a 10 CFR Part 73 plan, then the licensee must revise the 10 CFR Part 73 plan and procedures to include protection of risk significant byproduct material (since most 10 CFR Part 73 plans are only designed to protect special nuclear material). If revisions are made to a 10 CFR Part 73 plan, the updates must be submitted to NRC in accordance with 10 CFR 50.54, and 10 CFR 70.32, as applicable. The documentation should identify the 10 CFR Part 73 protective measures that are being credited (e.g., background investigations, access controls, and physical protection) such as access controls, physical barriers, intrusion alarms, weapons, tactical response.

Under a 10 CFR Part 73 plan, the level of effort required to ensure equivalent protection to 10 CFR Part 37 requirements will depend on the location of the material and how that location equates with the "security zones" described in 10 CFR 37.47, as well as the security measures that are in place for that location. Generally, if risk significant byproduct material is inside the PA of a power reactor, ISFSI or Category I special nuclear material (SNM) facility, the existing physical security measures required by 10 CFR Part 73 for the PA would provide protection equivalent to or greater than that required by the10 CFR Part 37 performance requirements.

However, if the risk significant byproduct material is outside the PA, a 10 CFR Part 73 plan is not likely to provide equivalent protection (unless substantially modified to meet the performance requirements of 10 CFR Part 37). If using a modified 10 CFR Part 73 plan for

[1] The NRC staff is addressing questions 3, 4, 8, 9, 10 and 11 in a single consolidated response because the questions are very similar and all pertain to the exemption language in 10 CFR 37.11(b).

areas outside the PA, the modified plan must provide documentation describing how the plan provides a level of protection equivalent to 10 CFR Part 37, Subparts B and C. Licensees would also have the option of moving the risk-significant material into the PA.

10 CFR Part 37 Security Plans: In lieu of a modified 10 CFR Part 73 plan, licensees may choose to develop a 10 CFR Part 37 security plan. A 10 CFR Part 37 plan may incorporate by reference, and take credit for, the protective measures of a 10 CFR Part 73 plan (thereby eliminating the need to revise a 10 CFR Part 73 plan to include protection of risk significant quantities of byproduct material). The 10 CFR Part 37 plans that do not rely on a revised 10 CFR Part 73 plan shall establish, describe, and document the protective measures necessary to achieve the performance objectives of 10 CFR Part 37 plans are not required to be submitted to NRC.

Note 1: Activated material is defined as neutron irradiated objects (objects internally contaminated with radioactive material are not considered activated materials).

Note 2: Large area surface contamination (e.g., in a reactor building (RB)) is not included in the determination of aggregated material, since this material is not subject to theft in quantities exceeding Category 1 or 2 quantities.

Removal of Radioactive Material from Security Zones: Security plans should address temporary security arrangements for removal of risk significant byproduct material from security zones and establishment of temporary security zones. Location of temporary security zones need not be documented in the 10 CFR Part 73 plan or procedures.

Q4: 10 CFR 37.11(b)—is the expectation based on the requirement that the licensee's physical security plan (required by 10 CFR Part 73) include elements of the requirements from 10 CFR Part 37 subparts B and C?

A4: See the response to A3 above.

Q5: 10 CFR Part 37.11(c)—do answers to questions 1–4 apply to a steam generator or reactor vessel head mausoleum? Typically these storage facilities may not be identified as radioactive waste storage.

A5: 10 CFR Part 37 focuses on protection of risk significant quantities of radioactive material and does not name specific facilities, components, or areas that need to comply or do not need to comply. Enforcement Guidance Memorandum (EGM) 2014-001: Interim Guidance for Dispositioning 10 CFR Part 37 Violations with Respect to Large Components or Robust Structures Containing Category 1 or Category 2 Quantities of Material at Power Reactor Facilities Licensed Under 10 CFR Parts 50 and 52 (RIN 3150-AI12), was issued March 13, 2014, and provides enforcement discretion with respect to large components (i.e., steam generators, steam dryers, turbine rotors, reactor vessels, reactor vessel heads, reactor coolant pumps, and shielding blocks) containing Category 1 or Category 2 quantities of radioactive material, and Category 1 and Category 2 quantities of radioactive material stored in robust structures such as a mausoleum (i.e., closed concrete bunker or modular vault, for which access to the radioactive materials contained within the structure, is gained only through the use of heavy equipment to remove structural components or large access blocks that weigh 2,000 kilograms or more) at power reactor facilities licensed under 10 CFR Parts 50 and 52.

Walls and component parts that become activated throughout their life are not considered to be waste until they are no longer useful for their intended purpose. Licensees are responsible for making the determination of when material will be no longer useful (considering the potential for spare parts, or recycling into other products or sale for other purposes). The regulations in 10 CFR Part 37 do not apply to activated material in walls and components during the operating life of a reactor, hot cell, or accelerator. Once the licensee removes activated material from use (whether from maintenance or during decommissioning) and declares the rubble or removed components as waste, then 10 CFR Part 37.11(c) criteria would apply.

Q6: 10 CFR 37.11(c)—does the criteria "weighs less than 2,000 kg (4,409 lbs)" apply to discrete sources, ion-exchange resins, activated material or does that criteria only apply to activated material? [NUREG 2155 includes "and activated material that weighs less than 2,000 kg (4,409 lbs)."]

A6: The 2000 kg criterion applies only to activated material (activation of objects such as metal components or individual concrete slabs that become radioactive through exposure to neutron flux).

Q7: FR notice Response to Comment B43—the response implies that the 10 CFR Part 73 procedures address the content of the required procedures under 10 CFR Part 37. Is this specific to subpart B or all subparts? Also is this requirement codified and what is the citation in 10 CFR Part 37?

A7: The comment and NRC response both pertain only to 10 CFR Part 37, subpart B. The commenter noted that "The procedures used for 10 CFR Part 73 background investigations and updating of background investigations, etc., should be considered adequate to meet the intent of 10 CFR Part 37." NRC agreed that a licensee does not need to maintain two sets of procedures for access authorization. Grandfathering of individuals found to be trustworthy and reliable under the provisions of 10 CFR Part 73 is addressed in 10 CFR 37.25(b).

Q8: 10 CFR 37.11(b)—I am a 10 CFR Part 50, 52 licensee and have a dosimetry calibrator that is greater than a Category 2 quantity stored inside of my protective area. What do I need to do to meet the exemption requirements of this section?

A8: See the response to A3 above.

Q9: 10- CFR 37.11(b)—I am a 10 CFR Part 50, and 52 licensee and have a dosimetry calibrator that is greater than a Category 2 quantity stored outside of my PA but inside of the owner controlled area (OCA). What do I need to meet the exemption requirements of this section?

A9: See the response to A3 above.

Q10: Please explain NRC's expectations for licensees with 10 CFR Part 73 security programs that elect to protect Category 1 and 2 materials under their 10 CFR Part 73 security programs. How does NRC envision this being implemented—please discuss any expectations for updates to physical security plans. Please discuss which elements of 10 CFR Part 73 would be sufficient to implement.

A10: See the response to A3 above.

Q11: Physical protection under 10 CFR Part 73 is not the same for all licensees (e.g. power reactors and fuel cycle facilities). Will licensees that elect to protect Category 1 and 2 materials under 10 CFR Part 73 be afforded flexibility with respect to the different levels of protection contained within the regulations?

A11: See the response to A3 above.

Q12: Can NRC please explain in detail the exemption in 10 CFR 37.11(c) as it applies to Low-Level Radioactive Waste (LLW)?

A12: The security requirements of 10 CFR Part 37 subparts B, C and D apply in their entirety to the following wastes that contain Category 1 and 2 quantities:

- discrete sources
- ion-exchange resins
- activated material <2,000 kg (i.e., irradiated metal or concrete)

Q13: What are NRC's expectations for implementation of 10 CFR 37.11(c)(1–4)? Specifically, has NRC considered what would be acceptable to meet the intent of questions1–4?

A13: 10 CFR 37.11(c)(1), use continuous physical barriers that allow access to the radioactive waste only through established access control points:

- 10 CFR 37.11(c)(2), use a locked door or gate with monitored alarm at the access control point;

- 10 CFR 37.11(c)(3), assess and respond to each actual or attempted unauthorized access to determine whether an actual or attempted theft, sabotage, or diversion occurred; and

- 10 CFR 37.11(c)(4), immediately notify the LLEA and request an armed response from the LLEA upon determination that there was an actual or attempted theft, sabotage or diversion of the radioactive waste that contains category 1 or category 2 quantities of byproduct material

Q14: Would it be acceptable to implement physical controls as described in RG 8.38, Section 1.5, specifically applying substantial barriers (e.g., bolted access covers, covers that require heavy equipment to open) as an alternate means to meet the requirements of 10 CFR 37.11(c)(2) and (3)?

A14: No. The physical controls described in RG 8.38 only provide reasonable assurance that the area is secure against unauthorized access by individuals trained in radiation protection. This is quite different from the intent of 10 CFR Part 37, which is to prevent theft or diversion of risk-significant material for malicious purposes, or acts of sabotage.

The specific measures described in the question may meet the requirements of 10 CFR 37.11(c)(1) and (c)(2). However, the described physical control measures do not appear to address the 10 CFR 37.11(c)(3) requirement to assess and respond to actual or attempted unauthorized access in order to determine whether an actual or attempted theft,

sabotage, or diversion occurred or the 10 CFR 37.11(c)(4) requirement to notify local law enforcement and request an armed response upon determination of an actual or attempted theft, sabotage, or diversion.

A request for alternative measures to 10 CFR 37.11(c)(1), (c)(2) and (c)(3) would need to be reviewed on a case by case basis as an exemption request under 10 CFR 37.11(a).

Q15: Can NRC please explain how safeguards information is expected to apply to 10 CFR Part 73 licensees? If licensees choose to protect Category 1 and 2 materials under 10 CFR Part 73, will the scope of SGI maintained at these facilities increase?

A15: The scope of SGI maintained at a facility would not increase. The physical security plan required under 10 CFR Part 73 is designated SGI. Information added to that plan for the purposes of compliance with 10 CFR Part 37 would not change the designation. No new SGI requirements are associated with 10 CFR Part 37.

Q16: Can NRC address how/when it will rescind RAMQC orders and discuss how SGI will be addressed in Subpart D?

A16: NRC security orders were rescinded by letter to coincide with the compliance date for the rule.

Q17: Can NRC please discuss the primary differences between subpart D and RAMQC?

A17: Please refer to the regulatory crosswalk in the Implementation Plan, which includes a comparison of the RAMQC orders and 10 CFR Part 37.

Q18: Would it be acceptable for licensees to designate their RO in accordance with 10 CFR 73.56 requirements and not require fingerprints of the ROs to be taken by a law enforcement agency as delineated in 10 CFR 37.23?

A18: Yes, the access authorization programs required by NRC regulations and Orders for power reactors, non-power reactors, utilization facilities and fuel facilities are deemed adequate for compliance with 10 CFR Part 37 and licensees need not create a separate program.

Q19: Would it be acceptable to grant access based on background investigations conducted in accordance with 10 CFR 73.56 (employment history, military, education and personal references) in lieu of the criteria in section 10 CFR 37.25?

A19: Yes, the access authorization programs required by NRC regulations and orders for power reactors, non-power reactors, utilization facilities and fuel facilities are deemed adequate for compliance with 10 CFR Part 37 and licensees need not create a separate program.

Q20: Would it be acceptable for licensees currently authorized under 10 CFR 73.57 to continue to collect and submit fingerprints directly to the FBI without having to submit the fingerprints to the NRC as specified in 10 CFR 37.27?

A20: Under 10 CFR 73.57(b)(2)(iii), any licensee currently processing criminal history requests through the FBI pursuant to Executive Order 10450 need not also submit such

requests to the NRC. Though not explicitly stated in 10 CFR 37.27, NRC considers that continuing this practice meets the intent of 10 CFR Part 37.

Second Group of Questions from the Nuclear Energy Institute

The attached Q&As are responses to questions from NEI, provided in an e-mail dated December 10, 2013, on how 10 CFR Part 37 applies to nuclear reactors and other facilities with security plans under 10 CFR Part 73. They were made public on the NRC Web site at https://www.nrc.gov/security/byproduct/10-cfr-part-37.html and provided to NEI.

Section I

Q1: Large Components and Exemptions:

Over 65% of power reactor sites will have large equipment weighing in excess of 2000 kg (e.g., steam generators, reactor heads, contaminated turbine equipment, etc.) housed outside their PAs, but within the OCA. These materials are self-protecting and should be exempt from the requirements of 10 CFR Part 37, in accordance with 10 CFR 37.11(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."

A1: EGM 2014-001 deals, in part, with this issue. (See the NRC response (A5) in the first group of questions from NEI.) EGM 2014-001 will remain effective until the underlying technical issue is dispositioned through rulemaking or other regulatory action. If a licensee has large components that are not covered by this EGM, a licensee may request individual exemptions under 10 CFR 37.11(a).

NRC cannot grant a general exemption from major provisions of the rule, as suggested by the comment, since a general exemption could potentially be seen as circumventing the notice and comment requirements of the Administrative Procedures Act.

Q2: 10 CFR 37.11 exemptions for 10 CFR Part 73 security plans (credit for 10 CFR 73.55(i)(5)(ii) materials (risk significant materials) of concern within the OCA located such that they are covered by the requirements of 10 CFR 73.55(i)(5)(ii) which states, "Continuous surveillance, observation, and monitoring responsibilities may be performed by security personnel during continuous patrols through the use of video technology, or by a combination of both." Licensee security plans required by 10 CFR Part 73 implement that rule requirement. Since this requirement is addressed in the 10 CFR Part 73 security plan, 10 CFR Part 37.11(b) applies and no other actions are required.

A2: See the NRC response (A3) in the first group of questions from NEI.

Q3: 10 CFR Part 73 Security Measures:

10 CFR Part 37 materials of concern stored inside the PA are covered by requirements as delineated in the Physical Security Plan for power reactors. Therefore, no further actions should be required for this material.

A3: A 10 CFR Part 73 plan does not provide a broad exemption from 10 CFR Part 37. The scope of 10 CFR Part 73 does not include the radionuclides of concern in 10 CFR Part 37.

However, as stated in the October 9, 2013 response to questions from NEI, generally, if risk significant byproduct material is inside the PA of a power reactor, ISFSI or Category I SNM facility, the existing physical security measures required by 10 CFR Part 73 for the PA would provide protection equivalent to or greater than that required by the 10 CFR Part 37 performance requirements. (See the NRC response (A3) in the first group of questions from NEI.) If a licensee is using its 10 CFR Part 73 security plan to meet the 10 CFR Part 37 requirements, the 10 CFR Part 73 security plan must be revised to include the 10 CFR Part 37 material in the protective strategy.

These measures must be documented in either a 10 CFR Part 37 plan or a 10 CFR Part 73 plan. The response to Q3 in the October 9, 2013 response to questions from NEI states that "The documentation should identify the 10 CFR Part 73 protective measures that are being credited (e.g., background investigations, access controls, and physical protection (such as access controls, physical barriers, intrusion alarms, weapons, tactical response))."

Q4: 10 CFR Part 73 Security Plans:

What is the level of detail to be included in a 10 CFR Part 73 security plan in order to comply with 10 CFR Part 37.11(b), "Any licensee's NRC-licensed activities are exempt from the requirements of subparts B and C of this part to the extent that its activities are included in a security plan required by 10 CFR Part 73 of this chapter"?

A4: See the NRC response (A3) in the first group of questions from NEI.

Section II

Q1: Waste Exempted from subparts B, C, D:

10 CFR 37.11(c)—This section exempts radioactive waste that contains Category 1 and Category 2 quantities of radioactive material from the requirements of subparts B, C, and D of 10 CFR Part 37.

NUREG-2155 (37.11(c), (Q&A3) discussion identify "rubble and removed components" as waste once decommissioning has begun and 10 CFR Part 37 would then apply.

My question is related to the applicability of 10 CFR Part 37.71 for components such as reactor vessel heads, steam generators that are transferred from the licensee classified as radioactive waste and contain "diffuse Category 1 or Category 2 quantities of radioactive material."

Note: The licensee is still operating and not decommissioning and dismantling the facility.

A1: 10 CFR 37.11(c) exempts wastes (other than discrete sources, ion-exchange resins, and activated material weighing less than 2000 kg) with Category 1 or 2 quantities of material from subparts B, C, and D of 10 CFR Part 37. The large components in question would be exempt from subparts B, C, and D if they are waste materials that weigh more than 2000 kg.

Q2: Components and Activated materials:

10 CFR 37.11(c), NUREG 2155 (37.11(c) Q&A2 and Q&A3)—What does the NRC consider to be components when referring to “activated materials in walls and components”?

A2: The phrase “activated material” means physical objects (such as walls or metal components) that have become radioactive by neutron irradiation. For example, control rod blades that have been exposed to neutron flux are activated material in components.

Q3: Radwaste filters:

10 CFR 37.11(c)—Are radioactive waste filters packaged in a High Integrity Container classified by the licensee as radioactive waste exempt from subparts B, C and D when it contains:

1. Diffuse Category 1 or Category 2 quantities; or
2. Category 1 or Category 2 radioactive material quantities.

A3: Radioactive waste other than discrete sources, ion-exchange resins, or activated material that weighs less than 2,000 kg (4,409 lbs) is exempt from the security requirements of 10 CFR 37, subparts B, C, and D. Therefore, if the aggregated waste in a package weighs less than 2,000 kg it must meet the requirements in 10 CFR Part 37, subparts B, C and D.

If the aggregated waste in a package weighs more than 2,000 kg, it is exempt from the requirements in subparts B, C and D of 10 CFR Part 37. However, the exempted radioactive waste must be protected in accordance with the security requirements for exempted waste in 10 CFR 37.11(c)(1) through (4).

Note: A licensee with radioactive waste filters stored inside robust structures should review the EGM 2014-001, to see if the EGM may apply.

Q4: Radwaste filters vs. Ion-exchange resin:

10 CFR 37.11(c)—what is the rationale for the security requirements of 10 CFR Parts 37 subparts B, C, and D applying to ion-exchange resin that contain Category 1 and Category 2 quantities of radioactive material but the same requirements do not apply to spent filter cartridges that contain Category 1 and Category 2 quantities of radioactive material?

A4: The NRC considered, among other things, specific activity level and the dispersibility of the material when drafting the 10 CFR 37.11(c) exemption. In future evaluation of 10 CFR Part 37, NRC will consider the need to apply subparts B, C and D to spent filter cartridges.

Q5: Protection of SGI-M information:

10 CFR 37.77(f)—protection of information formerly required the schedule information furnished in advance notification of shipment of Category 1 quantities of radioactive material (10 CFR 37.77(b)) to be protected against unauthorized disclosure as specified in 10 CFR 73.21.

I understand that all records generated under 10 CFR Part 37 are no longer designated SGI-M since the new immediate direct rule became final. Sensitive information generated under 10 CFR Part 37 is now protected under 10 CFR 37.43(d).

Are the records generated in 10 CFR 37 identified based on whether a licensee is required to protect that information in accordance with 10 CFR 37.43(d) or will the licensee need to make that determination?

A5: Information to be protected is defined in 10 CFR 37.43(d) as the security plan, implementing procedures, and the list of individuals that have been approved for unescorted access.

The advance notification information required by 10 CFR 37.77(b) that was protected under 10 CFR 73.21 is now protected under 10 CFR 37.43(d).

Q6: Transportation requirements:

10 CFR Part 37, subpart D, is a licensee implementing this subpart also required to implement 49 CFR 172 subpart I, “Safety and Security Plans,” or does 10 CFR Part 37 subpart D meet the requirement of 49 CFR 172.804?

A6: Both 10 CFR 37 subpart D and 49 CFR 172 requirements must be met. However, in accordance with the NRC and DOT regulations cited below, protective measures established in the 10 CFR Part 37 plan may be used to satisfy elements of the DOT requirements.

NRC Regulation 10 CFR 71.5, “Transportation of licensed material” specifies requirements for the transportation of licensed material on public highways, or for persons who deliver licensed material to a carrier for transport. The NRC regulations require licensees to comply with the applicable requirements of the DOT regulations in 49 CFR Parts 107, 171 through 180, and 390 through 397.

49 CFR 172.804, “Relationship to other Federal requirements.” To avoid unnecessary duplication of security requirements, security plans that conform to regulations, standards, protocols, or guidelines issued by other Federal agencies, international organizations, or industry organizations may be used to satisfy the requirements in this subpart, provided such security plans address the requirements specified in this subpart.

Q7: Security for radwaste shipments in preparation for transit:

10 CFR 37.47—when a licensee is in the process of completing shipping papers to transfer a Category 1 or Category 2 quantity of radioactive material to a carrier outside of the protective area but inside of the owner control area, what are the applicable requirements related to “security zones”?

Does this requirement in subpart C apply to a licensee implementing subpart D that is exempt from subpart B and subpart C under 10 CFR 37.11(b)?

A7: If the material is subject to subparts B and C, the licensee must use and store the material within a security zone. This would include waste materials.

If the material subject to subparts B and C has been moved outside the PA in preparation for transport, it remains subject to subparts B and C and also to subpart D. Licensees may satisfy these requirements by establishing a temporary security zone in accordance with10 CFR 37.47(b) that provides the required protective measures.

For Category 1 or 2 waste materials exempted from subparts B, C, and D under 10 CFR 37.11(c) the waste is only subject to 10 CFR 37.11(c)(1–4) while in storage on site. Once the shipment begins, the waste is subject to DOT transportation security requirements.

Q8: Large components storage:

10 CFR 37.11(c)—do items, Q&As 1–4 apply to a steam generator or reactor vessel head mausoleums? Typically these storage facilities may not be identified as radioactive waste storage.

The question was intended to apply to the material in the building. The question is do the controls apply to a single item or collection of items specified in 37.11(c)?

If steam generator mausoleums and similar storage facilities with limited access are exempted, would material in the facility be exempted (e.g., in addition to steam generators, we store irradiated hardware such as control rod guide tubes, control rod drive mechanisms, along with contaminated reactor coolant system piping in the mausoleum)?

A8: Initial NRC Response—10 CFR Part 37 focuses on protection of risk significant quantities of radioactive material and does not name specific facilities, components, or areas that need to comply. Walls and component parts that become activated throughout their life are not considered to be waste until they are no longer useful for their intended purpose. Licensees are responsible for making the determination of when material will be no longer useful (considering the potential for spare parts, or recycling into other products or sale for other purposes). The regulations for waste in 10 CFR Part 37 do not apply to activated material in walls and components during the operating life of a reactor, hot cell, or accelerator. Once the licensee removes activated material from use (whether from maintenance or during decommissioning) and declares the rubble or removed components as waste, then 10 CFR 37.11(c) criteria would apply.

The controls in 10 CFR 37.11(c) apply to aggregated waste material regardless of whether the material consists of a single item or multiple items. When determining the amount of radioactive material subject to aggregation, the radioactive material in large components or robust structures is not included in the aggregation if it meets the criteria for enforcement discretion provided by EGM 2014-001 or is otherwise exempted. Other radioactive material not protected by the physical form of large components (such as control rod drive mechanism, irradiated hardware, etc.) must be aggregated and protected as required by 10 CFR Part 37. The EGM provides enforcement discretion for large components and material within robust structures; however, a mausoleum or similar structure in itself is not exempt from the regulations.

A mausoleum could contain items that have been granted an exemption or enforcement discretion and items that have not. If the non-exempt items are subject to subparts B and C or to 10 CFR 37.11(c)(1–4), they would remain subject to those requirements.

Q9: Exempt radwaste requirements:

Initial Licensee Question 12—can NRC please explain in detail the exemption in 10 CFR 37.11(c) as it applies to LLW?

Follow-up Licensee Question 12—under 37.11(b), licensees (with 10 CFR Part 73 security plans) are exempt from subparts B and C. Are those licensees also exempt from the radwaste security requirements in 10 CFR 37.11(c)?

a. What about large areas of equipment storage or in open areas of the power block in the plant or Protected Area? This would not be waste material, but all of the equipment in a large storage area might exceed Category 2. This clarification is key as all power plant licensees have storage areas for equipment.

b. Should sites estimate curie content of equipment aggregated within the plant or within the PA? While there may not be a subpart B or C requirement inside the PA, is it expected that all areas inside the PA have the activity quantified?

c. If areas inside the PA are generically exempt as part of the 10 CFR Part 73 program, would the PA itself just be considered a single "security zone"?

d. Shouldn't equipment items or areas receive a similar exemption from subparts B, C, and D similar to diffuse types of wastes specified in 10 CFR 37.11(c) or is that implied?

A9: Initial NRC Response—the security requirements of 10 CFR Part 37 subparts B, C and D apply in their entirety to the following wastes that contain Category 1 and 2 quantities:

- discrete sources
- ion-exchange resins
- activated material <2,000 kg (i.e., irradiated metal or concrete)

Other waste forms are exempted from the security requirements of subpart B, C, and D. However, these waste forms, such as contaminated clothing, gloves, soil, or low specific activity waste must meet the security requirements of 10 CFR 37.11(c)(1) through (c)(4) if they contain Category 1 and 2 quantities.

Follow-up NRC Response—licensees with 10 CFR Part 73 plans are exempt from subparts B and C only to the extent that their licensed activities are provided an equivalent or greater level of protection as documented under their 10 CFR Part 73 plan. An exemption under 10 CFR 37.11(b) would not exempt licensees from the 10 CFR 37.11(c) radwaste security requirements, which are in subpart A.

a. Licensees must define their own licensee-established security zones in accordance with 10 CFR 37.47(a). Licensees could choose to define the PA as a single security zone or define multiple security zones within the PA. Within a security zone, if material is separated by barriers so that the breach of any one barrier would not permit access to an aggregated quantity, the material is not considered aggregated. A physical barrier is a natural or manmade structure or formation sufficient for the isolation of a Category 1 or Category 2 quantity of radioactive material within a security zone. One crucial distinction is between security zones and barriers. Not all the material within a security zone is

aggregated: there can be barriers within the security zone that separate the material. Aggregation is based on the ability to gain access to the material by the breach of a single barrier.

b. In order to determine whether 10 CFR Part 37 requirements are applicable, licensees should determine whether materials accessible by the breach of a single barrier contain activity aggregating to Category 2 levels. Licensees are allowed to conservatively bound the amount of activity as "more than" or "less than" a Category 2 amount of activity. Licensees may find it useful to put the activity into material categories; e.g., ion-exchange resin, filters, equipment contamination.

c. Areas inside the PA are not exempt from 10 CFR Part 37 if the aggregated material exceeds a Category 2 quantity. However, licensees are allowed to use their 10 CFR Part 73 plans to protect the material from theft and diversion as required by 10 CFR Part 37.

d. 10 CFR 37.11(c) exempts diffuse wastes from subparts B, C, and D but they remain subject to 10 CFR 37.11(c)(1–4). There is no exemption in 10 CFR Part 37 for equipment items or areas. 10 CFR 37.11(a) allows licensees to apply for exemptions from requirements if they can articulate a basis for meeting the exemption criteria.

Q10: Radwaste forms exempt from subparts C and D:

Initial Licensee Question 13—what are NRC's expectations for implementation of 10 CFR 37.11(c)(1–4)? Specifically, has NRC considered what would be acceptable to meet the intent of Q&As 1–4?

Licensee Follow-up Question—would these controls only be applicable if the equipment or waste was stored outside of the PA based upon the previous NRC response?

A10: Initial NRC Response—NRC believes the language in the rule is clear as written in 10 CFR 37.11(c),

- 10 CFR 37.11(c)(1)—use continuous physical barriers that allow access to the radioactive waste only through established access control points;
- 10 CFR 37.11(c)(2)—use a locked door or gate with monitored alarm at the access control point;
- 10 CFR 37.11(c)(3)—assess and respond to each actual or attempted unauthorized access to determine whether an actual or attempted theft, sabotage, or diversion occurred; and
- 10 CFR 37.11(c)(4)—immediately notify the LLEA and request an armed response from the LLEA upon determination that there was an actual or attempted theft, sabotage or diversion of the radioactive waste that contains Category 1 or Category 2 quantities of byproduct material.

Follow-up NRC Response—the controls for waste forms excluded from subparts B, C and D would be applicable anywhere the waste is stored, inside or outside a Protected Area.

Q11: New Reactors:

How does 10 CFR 73 and/or 10 CFR 37 apply to new reactors during construction (e.g., a Shepherd calibrator may be shipped to new site under construction and need to be stored for a period of time)?

A11: If the 10 CFR Part 73 plan is in effect, and documents the protection of the material at a level equivalent to or greater than 10 CFR Part 37, the calibrator is protected. If the 10 CFR Part 73 plan does not provide at least an equivalent level of protection, then a 10 CFR Part 37 plan must be established and implemented. Also see 10 CFR Part 37.41 for applicable requirements.

Q12: Robust structures:

We have a radwaste facility located outside the PA. The facility is used to process liquid waste and store primary resins and filters until packaged and shipped for disposal. Access is controlled with a card reader. A single liner is stored in a bunker. Each bunker is covered by a large shielding block. Removal of the shield blocks can only be performed using an overhead crane. Several questions, could a facility like this be exempted from 10 CFR 37 similar to S/G mausoleums?

If not, do all the liners stored in each of the bunkers need to be aggregated to determine if Category 1 or 2 quantities are exceeded?

A12: Licensees may apply for exemptions in accordance with 10 CFR Part 37.11 and provide justifications for the exemption requests.

The facility as described may be subject to enforcement discretion as provided by EGM 2014-001. In the absence of an exemption or enforcement discretion, licensees must provide the protective measures required by 10 CFR Part 37. There is no exemption from 10 CFR Part 37 for steam generator mausoleums.

Licensees need to define their security zones, and determine whether the aggregated material accessible by the breach of a single barrier reaches the Category 2 activity level. See Q&A 14 below.

Q13: Waste ready for Transport:

For waste packaged and ready for transportation for disposal that exceeds Category 1 or 2 quantities, who has the responsibility for ensuring compliance with 10 CFR 37 when the waste leaves the PA (transporter or power reactor licensee,) inside the OCA, and on the highway? My concern is that in most cases the vendor will not accept title to the waste until it arrives at the disposal or processing facility.

A13: As long as the licensee is in possession of material subject to 10 CFR Part 37, the licensee must comply with the rule. If the waste material is onsite, whether in the PA or outside the PA, the licensee is responsible for the security of the material until the transportation carrier accepts the consignment for shipment.

For material that is staged for shipment, the licensee may protect the material by establishing a temporary security zone around the material. In accordance with the FR notice, 78 FR, No. 53, p. 16933, "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."

For material in transit, see NUREG-2155, 10 CFR 37.79(a)(2) particularly Q&A 5 (excerpted below):

"Q5: 10 CFR 37.79(a)(2) requires constant control and/or surveillance "during transit." When does "transit" begin and end for the purposes of this requirement?"

"A5: In general, transit begins when the carrier accepts the consignment of radioactive material for shipment. Transit ends when the receiving licensee accepts the shipment from the carrier.

During transport, the material must be protected in accordance with subpart D (e.g., using movement control centers and direct control and constant surveillance).

The shipping licensee is responsible for meeting the requirements unless the receiving licensee agrees in writing to arrange for the in-transit physical protection, including preplanning and coordination activities. A shipping licensee that uses a carrier must ensure that the carrier can meet the physical protection requirements for shipments."

Q14: Aggregation:

Aggregated definition—sea/land containers are large enough to be a storage area, yet are also containers in transit. Would several sea/land containers grouped together be individual security zones as each is protected by its individual barrier?

Would the amount of aggregated material be that material in each Sea/Land container or based on all the containers combined?

A14: *Aggregated* means accessible by the breach of a single physical barrier that would allow access to radioactive material in any form, including any devices that contain the radioactive material, when the total activity equals or exceeds a Category 2 quantity of radioactive material.

Whether material is aggregated depends on whether access to it requires the breach of one barrier, not on how much is in a security zone. Licensees may define each Sea/Land container as its own security zone, or licensees may define a security zone as having multiple containers. Within a security zone, if material is separated by barriers (e.g., locked Sea/Land containers), so that an aggregated amount would be accessible only by the breach of multiple barriers (for example breach of two sea/land containers), the material is not considered aggregated.

If Sea/Land containers with material are not locked, then the material is considered aggregated.

Q15: Licensee Verification Systems:

10 CFR 37.71—based upon the exemptions in 10 CFR 37.11(b) and (c), is the LVS only required for Category 2 or higher waste discrete sources, ion-exchange resins, activated metal <2000 kg, and non-waste byproduct equipment or source shipments? Shouldn't non-waste byproduct material like equipment shipments be exempt like other diffuse sources of waste in 10 CFR 37.11(c)?

A15: Under the rule, license verification is required under 10 CFR 37.71 for transfers of Category 1 or 2 material (except for waste exempt from subparts B, C and D under 10 CFR 37.11(c)).

The transport of Category 1 and 2 materials (other than waste materials exempted in 10 CFR 37.11(c)), whatever the form, is subject to license verification and other requirements of 10 CFR Part 37. EGM-14-001 provides the possibility of enforcement discretion for large components and material in robust structures.

Q16: Material inside fences:

If there is a locked building that contains several locked fences (different lock from each other and the building door) and radioactive material in any fenced in area is less than Category 2 quantities of radioactive material, is this considered not aggregated in which 10 CFR Part 37 does not apply?

A16: If an adversary has to breach more than one physical barrier to gain access to radioactive material located in different areas within the building or room to equal a Category 2 or greater quantity of material, the material would not be considered aggregated and would not be subject to 10 CFR Part 37 security measures.

If the building or fence is robust enough to constitute a physical barrier, the material is considered isolated. Under 10 CFR 37.47(c)(1), a physical barrier is a natural or manmade structure or formation sufficient for the isolation of a Category 1 or Category 2 quantity of radioactive material within a security zone.

Third Group of Questions from the Nuclear Energy Institute

The following is the third set of Q&A responses to questions from NEI, provided in an e-mail dated July 30, 2015, and at the Radiation Protection Forum on August 5, 2015. These questions focus on how 10 CFR Part 37 applies to nuclear reactors and other facilities with security plans under 10 CFR Part 73. They have been made public on the NRC Web site at http://www.nrc.gov/security/byproduct/10-cfr-part-37.html.

Operating Plant Questions

Q1: Interpretations of Regulations—10 CFR Part 37.11(b) Exemptions:

Neither the NRC nor the licensees have leave to interpret what the regulation meant to say. The rules cannot be interpreted through regulation by inspection. The exemption in 10 CFR 37.11(b) is clear—if the activities are protected by the 10 CFR Part 73 security provisions, then the subparts B and C of 10 CFR Part 37 do not apply. Therefore by regulation, any Category 1 or 2 materials within the PA are adequately protected...no further actions are required. There are other regulations that govern inventory and verification of sources, but those sources as well as any other Category 1 or 2 materials are already secured by the 10 CFR Part 73 security plan. As an industry, we should insist the rule be applied as written. There are processes for changing the rule if needed—imposing rules through a Temporary Instruction (TI) is not a rule change process.

Per the regulation stated in 10 CFR 37.11(b), any licensee's NRC-licensed activities are exempt from subparts B and C of 10 CFR Part 37 to the extent its activities are included in a security plan required by 10 CFR Part 73 (interpreted by the NRC as activities within the PA). Considering the very clear exemption in 10 CFR 37.11(b), please explain the regulatory basis requiring "material accountability" and "inventory" of Category 1 and 2 materials within the PA.

A1: The NRC has interpreted the regulation as written—"any licensee's NRC-licensed activities are exempt from subparts B and C of 10 CFR Part 37 to the extent its activities are included in a security plan required by 10 CFR Part 73." (emphasis added). Therefore, as stated in NUREG-2155 and in the two sets of Questions and Answers Concerning the Application of 10 CFR Part 37 to Licensees with 10 CFR Part 73 Security Plans (http://www.nrc.gov/security/byproduct/nei-pt-37.pdf and http://pbadupws.nrc.gov/docs/ML1430 (ADAMS Accession Number, ML14307B321.pdf), licensees may choose to protect their material under an existing 10 CFR Part 73 security plan, modified to include the 10 CFR Part 37 material, or a new 10 CFR Part 37 plan. The licensee must describe the existing physical security protection measures being used to ensure the 10 CFR Part 37 material (e.g., calibrator) is being protected from theft and diversion. The new 10 CFR Part 37 plan can implement the 10 CFR Part 37 rule as written, or may credit the security measures of the 10 CFR Part 73 plan if supplemented with material accountability and training. The regulation in 10 CFR 37.11(b) does not remove security requirements from the material completely, it avoids duplicative security of the material.

If the licensee is crediting the security measures of the 10 CFR Part 73 plan as providing protection of 10 CFR Part 37 material, the licensee must describe the 10 CFR Part 73 security measures being used/relied upon to provide protection against theft and diversion. The security measures the licensee may credit include:

- Access Authorization;
- Perimeter Intrusion Detection and Assessment;
- Access Controls associated with establishment and maintenance of PA;
- Fitness for Duty;
- Behavioral Observation;
- Insider Mitigation;
- Visitor Escort and Control;
- Safety Security Interface; and
- Suspicious Activity Reporting

Q2: Revision of the 10 CFR Part 37 Rule:

The industry concern with the TI was around the need to aggregate and account for quantities of concern inside the 10 CFR Part 73 licensee PA. It appears the weekly inventory was the only aspect addressed. Are there efforts to further reduce the cumulative impact of this rule?

A2: The NRC received and docketed a petition for rulemaking (ADAMS Accession Number ML14199A570) dated June 12, 2014, filed by NEI (*Federal Register*, Volume 80, page 33450, dated June 12, 2015).

The petition requested NRC to:

- remove undue regulatory burden for facilities with 10 CFR Part 73 security plans
- improve the clarity of 10 CFR Part 37 and provide greater regulatory certainty
- exempt large components and material stored in robust structures

In SECY-17-0025, "Update On Source Security And Accountability Activities," the staff informed the Commission that it intends to provide an integrated rulemaking plan for 10 CFR Part 37 to the Commission that incorporates all the existing activities that are relevant to source security and accountability. This integrated rulemaking plan will include issues raised by NEI's petition, PRM-37-1.

Q3: 10 CFR Part 73 Security Measures in the Protected Area:

Besides training and material accountability, are there any additional security controls that must be in place for Shepherd calibrators inside the PA (if the PA is defined as a security zone)?

A3: If a device is mobile, 10 CFR 37.53 requires two independent physical controls to secure the material from unauthorized removal when it is not under direct control and constant surveillance by the licensee. One of the controls may be the barrier that forms the security zone, and the second control may be a locked wheel on a Shepherd calibrator, or storage of a radiography device in a locked cage or in a locked room or secured with a chain or other device. If the mobile device is in use, it must be under direct control and constant surveillance of an authorized person.

Material Accountability

Q4: Section 03.02 b. of TI 2800/041, Revision 1 contains extensive discussion of requirements for material accountability within the PA:

a. In accordance with 10 CFR 37.11(b), "Any licensee's NRC-licensed activities are exempt from the requirements of subparts B and C of this part to the extent that its activities are included in a security plan required by 10 CFR Part 73 of this chapter." NRC guidance and the TI go on to explain "…physical protection measures in the protected area (PA) that are required by 10 CFR Part 73 for a power reactor, ISFSI, or fuel cycle facility provide reasonable assurance of the security of 10 CFR Part 37 material." Please explain the regulatory basis for requiring a material accountability process for Category 1 and 2 materials inside the PA—this is the only section of the TI that does not cite a section of the 10 CFR Part 37 regulation for reference.

b. The material accountability section of the TI states, "The process should also include identifying the generation or disposition of 10 CFR Part 37 material (e.g., transfer of material to another licensee or movement from one security zone to another)." Then the "Guidance" portion expands that to include tracking material within the security zone by having the inspector verify "that records on the generation, movement, or disposition of 10 CFR Part 37 material within a security zone, or from one security zone to another, are updated and maintained according to licensee procedures." With consideration of the very broad exemption in 10 CFR 37.11(b), please explain what section of the 10 CFR Part 37 rule requires tracking of Category 1 or 2 materials within the PA (security zone).

c. Considering the exemption in 10 CFR 37.11(b) and the fact the words "material accountability" and "inventory" do not appear in the 10 CFR Part 37 regulation, please explain the regulatory basis for the following inspection guidance described in Section 03.02b. of the TI: "The inspector should select one or two samples to verify the effectiveness of the licensee's process for 10 CFR Part 37 material accountability and inventory control inside the PA."

d. Section 03.02b. of the TI states "10 CFR Part 37 material within reactor systems and the spent fuel pool are considered to be protected with respect to 10 CFR Part 37 requirements by the nature of the protective measures implemented to meet the 10 CFR Part 73 requirements and radiological protection measures implemented to meet 10 CFR Part 20 requirements, and therefore are beyond the scope of this TI." That statement appears to contradict the broad exemption provided in 10 CFR 37.11(b) by limiting the 10 CFR Part 73 security protections within the PA to only the materials within the reactor systems and the spent fuel pool. Please verify the exemption in 10 CFR 37.11(b) applies as "Any licensee's NRC-licensed activities…" and not just to materials within the spent fuel pool and the reactor systems.

A4: Licensees should have a process to account for 10 CFR Part 37 material in order to demonstrate they are protecting 10 CFR Part 37 material. Licensees must have an understanding of what the material is, approximately where the material is located and how the material is being protected. An inventory may be an acceptable tool to facilitate material accountability, but is not required. Other reasonable measures may also be used to ensure the material is protected.

Q5: Updating Material Accountability Information:

Are inventory plans updated during material movement or is an annual inventory plan adequate to meet approximate amount of material and location requirements?

A5: The generation or disposition of 10 CFR Part 37 material should be included, in a timely manner, as part of the accountability process (e.g., transfer within a security zone, movement from one security zone to another, or transfer of material to another licensee).

Q6: 10 CFR Part 37 Material in System, Structure, and Component (SSC):

What exactly is the NRC looking for with regard to detailed inventory/inspection of Category 1 or Category 2 quantities of radioactive material within defined security zones covered by 10 CFR Part 73? When do they consider material/waste no longer in the system? I have been to different conferences nobody has consensus on this issue.

The answer (in NUREG-2155) to Q&A 3 in the explanation of 37.11(b) states in part, “Activation products contained in the structure (such as the stainless steel lining of a reactor vessel, stainless steel bolts, or the reactor hull) would not be subject to 10 CFR Part 37 as long as these materials remain an integral component of a reactor.” Does this exemption include systems that support reactor operation such as Liquid Radioactive Waste systems or Makeup Water systems?

A6: 10 CFR Part 37 radioactive material (activation products and fission products) contained in, or part of a SSC or auxiliary support systems (e.g., in-process ion-exchange resin beds or filter housings, installed resin storage tanks, spent fuel cooling systems, radwaste processing systems, underwater vacuum systems, skid mounted demineralizer systems, radiation monitoring systems, in-core or ex-core detectors, etc.) would not be subject to 10 CFR Part 37 requirements as long as this material remains in place within such a system.

Q7: Material Accountability after Material is removed from SSCs:

Once resin or filters are removed from the reactor structure or reactor system components, is the licensee required to update and track the cumulative amount of radioactive material? For example, resin sluiced into a liner or high integrity container or filters removed from the reactor coolant clean-up system and placed in a portable storage containers.

Does the licensee have to determine the curie content for each addition and maintain records of such to determine the total curie content to either prove or disprove the liner or filters meet Category 1 or 2 in each area where the portable storage containers or high integrity containers located?

A7: Material accountability begins at the point when the material is removed from a SSC or auxiliary support system (such as the reactor coolant system or spent fuel cooling system, or other components such as volume control tanks, valves, demineralizers, etc.) and becomes portable.

Licensees may conservatively estimate the total quantity of radioactive material possessed in containers of resin or in filter canisters as being Category 1 or 2 material based on dose rate surveys and historical information on isotopic content. Minor amounts of radioactive material do

not need material accountability. Note: The purpose of the aggregation requirement is to determine whether or not the licensee has 10 CFR Part 37 material; and if so, when it becomes subject to 10 CFR Part 37 requirements.

Q8: Material Accountability in "Spent Fuel Pools":

The TI, on page 3 does not provide for material stored within a spent fuel pool as being excluded from 10 CFR Part 37 requirements. The TI, on page six under material accountability described 10 CFR Part 37 material inside the PA and inside a spent fuel pool as protected and considered beyond the scope of the TI. Why is this statement in this specific section and not in the more global section of 03.01 Inspection Preparation? Is the material within the spent fuel pool only excluded from the material accountability requirement?

A8: Because of the existing requirements that apply to the spent fuel pool, licensees do not have to provide material accountability for 10 CFR Part 37 material in the spent fuel pool. 10 CFR Part 37 material in the spent fuel pool is, however, subject to 10 CFR Part 37 security measures. Licensees may demonstrate compliance with 10 CFR Part 37 security measures if the 10 CFR Part 37 material in the spent fuel pool is protected by a 10 CFR Part 37 security plan, or by a 10 CFR Part 73 security plan supplemented with training.

Q9: Defining a Security Zone:

A licensee maintains a Category 2 source within the protected area boundary. The Category 2 source is located in a room within a building that is located inside the protected area boundary which is designated as the security zone. The room does not meet the requirements of a physical barrier. The licensee takes credit for the protected area boundary as the physical barrier. Does this meet the intent of 10 CFR Part 37?

A9: Yes, licensees have the flexibility to determine their security zones based upon the site specific nature of their facility and the 10 CFR Part 37 material in their possession. Licensees may define their PA as a security zone and meet the intent of the security zone requirements in 10 CFR Part 37.

Q10: Radiography:

A licensee determines the security zone to be the (10 CFR Part 73) PA and has identified the approximate location of possible Category 1 or 2 material located within specific buildings inside the protected area. As long as that material remains within these buildings during radiography operations are the requirements for accountability and inventory control met?

Is the licensee required to inform Security every time the radiography source is moved inside the protected area (i.e. radiography source being used during an outage in numerous locations within auxiliary, containment or turbine building)?

A10: The licensee's material accountability process for radiography equipment should identify the storage location or status of the material (e.g., in storage in a particular area, or in use under the control of an authorized user). If the source is under direct control and constant surveillance while in use, its location need not be specified. A mobile source not under direct control and observation, such as a radiography camera, requires two independent physical controls, one of which may be the physical barrier of the security zone.

Q11: Exempted waste materials:

a. The answer (in NUREG-2155) to Q&A 2 in the explanation of 37.11(c) states in part, "Radioactive waste with diffuse category 1 or category 2 quantities of radioactive material, as opposed to discrete sources, is exempt only from the requirements in subparts B, C, and D of 10 CFR Part 37. These wastes are subject to the requirements in 10 CFR 37.11(c)(1) through 10 CFR 37.11(c)(4) in Subpart A, 'General Provisions,' of 10 CFR Part 37."

b. Do activities involving (exempt) waste with diffuse material, such as spent filters and DAW, which are conducted inside the PA meet all the requirements of 37.11(c)(1) through 37.11(c)(4)?

c. How are these wastes subject to material accountability in spite of being exempted from subpart B, C, and D of the regulation per 10 CFR 37.11(c)?

d. What is the regulatory basis for the material accountability requirements for radioactive materials inside areas covered by a security plan required by 10 CFR Part 73?

A11: 10 CFR Part 37 exempted waste materials are only subject to the requirements of 10 CFR 37.11(c)(1) through (c)(4). Material accountability and training are required to the extent necessary to identify the materials as 10 CFR Part 37 exempt waste, and to the extent necessary to meet 10 CFR 37.11(c)(1) through (c)(4).

Q12: Large Components and Robust Structures:

What and why do you have to provide detailed analysis of equipment required to move or steal large items such as old steam generators? This is what appears to be the requirement in the TI. It seems intuitively obvious and serves no useful purpose to have to create a document on what is required to move large items such as this.

A12: 10 CFR Part 37 materials in large components and robust structures are not exempt from 10 CFR Part 37 requirements. However, NRC has determined that enforcement discretion is appropriate under a defined set of conditions identified in EGM 2014-001. The written analysis is to ensure the NRC assumptions bound the actual conditions found at each licensee's facility.

In performing the written analysis, the licensee may make reasonable assumptions in determining the time it would take to remove the material, and the time it would take to detect such removal. The assumptions in the written analysis should be specific to the licensee's site and available equipment. The analysis need not be complex or lengthy, but should provide the information necessary to demonstrate that the licensee has considered the security of the large components/robust structures relative to the specific site features and equipment available. An analysis that documents the following items is deemed sufficient:

1. the equipment needed to access and remove the material in a large component or robust structure;

2. the time (reasonable assumptions allowed) it would take to deploy the equipment needed and to access and remove the material;

3. the time needed for security measures; e.g., roving patrols, security post observations, cameras, observation by licensee's authorized persons, etc., to detect such movement; and

4. that there will be no decrease in the effectiveness of the 10 CFR Part 73 security plan through use of any of the 10 CFR Part 73 security measures identified in (3) above by performing these duties.

Outside the Protected Area

Q13: Control of Vendors:

What measures are established to ensure adequate control over vendors (e.g. truck drivers) accessing security zones with materials outside of PA? Is being escorted by an authorized individual sufficient control?

A13: The escort for the unauthorized individual must be an individual that meets the access authorization requirements of subpart B—Background Investigations and Access Authorization Program. This would include individuals determined to be T&R under 10 CFR Part 73 (see 10 CFR 37.25(b)(2) "Grandfathering").

Q14: Tamper Indicating Devices and Intrusion Detection Equipment:

What is expectation/periodicity for security performing physical tamper monitoring actions? Note: 37.49(a)(3)(ii) states, "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."

A14: If tamper indicators, such as a seal on a 55 gallon drum, are used for verification of presence of Category 2 material, the integrity of the seal would have to be monitored weekly (37.49(a)(3)(ii)). Verification of the presence of Category 2 material may also be performed through physical checks, actual use of the materials, or other means.

For security system equipment, a maintenance program must be established to maintain the equipment in operable condition to ensure the systems are capable of performing their intended function when needed. This would include routine inspection of the equipment relied on to meet the security requirements for inspection and testing at the manufacturer's suggested frequency, or if not specified by the manufacturer, inspection and testing at least annually.

Q15: Mobile Devices outside the PA:

Are the 10 CFR Part 37 mobile devices' requirements applicable only to material outside of the PA as suggested by the TI, section 03.03 j. Mobile Devices?

A15: Section 03.03 of the TI is applicable to areas outside the PA. Therefore, inspection requirements in the TI, section 03.03 j for mobile devices are applicable only to material outside the PA. As noted in Q&A 3 and 10 above, the 10 CFR 37.53 requirement for two independent physical controls applies to mobile devices regardless of location.

Decommissioning Questions Regarding 10 CFR Part 37 and 10 CFR Part 73:

Q16: A nuclear plant will have all the spent fuel on the ISFSI pad around 2018 and will submit a security plan to reduce the 10 CFR Part 73 security barrier to just around the ISFSI pad. We will leave the current protected area/restricted area fence in place just to minimize access to the plant radioactive material areas. The RB will be locked by security. Inside the RB are some SNM contained in x-core detectors and some small amount of SNM in specimen capsules in the core barrel containing surveillance dosimetry (contains much less than 5 grams SNM).

Does the RB and its contents have to be under 10 CFR Part 37 security requirements or 10 CFR Part 73 security requirements or neither for guarding this type SNM?

A16.a: SNM is regulated under 10 CFR 70, "Domestic Licensing of Special Nuclear Material," and 10 CFR 73, "Physical Protection of Plants and Materials." Only Category 1 and Category 2 quantities of radioactive material as defined in 10 CFR Part 37 are regulated under the 10 CFR Part 37 rule. If the RB contains Category 1 or 2 quantities of material, the licensee is required to implement Part 37 requirements or provide an equivalent level of protection as described in Regulatory Issue Summary, (RIS) 2015-15, "Information Regarding a Specific Exemption in the Requirements for the Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material."

Q16.b: *Do incore detectors that have been abandoned in place…… inserted into the Rx Vessel have to be under the requirements of 10 CFR Part 37? RB will be locked and if needed have a commercial grade alarm on the doors? Babcock and Wilcox design incore detectors are inserted then bolted in place….only removed by unbolting, pulling 50 -60 feet of cable/tubing…. irradiated portion in the last 6-10 feet with detector on end. No 10 CFR Part 73 security systems or officers are planned to be guarding the RB.*

A16.b: 10 CFR Part 37 provides the requirements for a physical protection program for aggregated Category 1 or 2 quantities radioactive materials, which includes Category 1 or 2 material in incore detectors, or in other components, regardless of their location. As explained in NUREG-2155, activation products contained in the structure (such as the stainless steel lining of a reactor vessel, stainless steel bolts, or the reactor hull) would not be subject to 10 CFR Part 37 as long as these materials remain an integral component of a reactor. (NUREG-2155, Rev. 1, section 10 CFR 37.11(b), Q&A 3) Furthermore, if certain qualifications are met, the reactor vessel, containing the incore detectors, may be considered a large component subject to EGM 2014-001 (see EGM 2014-001: Interim Guidance for Dispositioning 10 CFR Part 37, "Violations with respect to Large Components or Robust Structures Containing Category 1 or Category 2 Quantities of Material at Power Reactor Facilities Licensed under 10 CFR Parts 50 and 52).

Q16.c: *Do any removable in plant components in the auxiliary Building or RB have to be under the 10 CFR Part 37 requirements after the 10 CFR Part 73 security area is removed and only around the ISFSI pad? We will have removed all spent filters and drums of waste from the radwaste processing areas…..including cleaning out all items from the spent fuel pool……filters, cut up incores and fuel assembly parts. We will clean out and remove all hi-rad spent resin and ship for burial after the planned reduction in 10 CFR Part 73 security footprint……but this will be under 10 CFR Part 37 even though outside the 10 CFR Part 73 security area at this time.*

A16.c: As explained in the consolidated response to Q&A 3, 4, 8, 9, 10 and 11 in the first set of Q&As, https://www.nrc.gov/security/byproduct/nei-pt-37.pdf, and in RIS 2015-15, https://www.nrc.gov/docs/ML1509/ML15092A432.pdf, a licensee can choose to protect Category 1 and 2 material using a 10 CFR Part 73 physical security plan approved by the NRC, a separate 10 CFR 37 security plan, or use both their 10 CFR Part 73 security plan and a separate 10 CFR Part 37 security plan. If a licensee's 10 CFR Part 73 plan does not provide equivalent protective measures for radioactive materials subject to 10 CFR Part 37, then the licensee must implement a 10 CFR Part 37 plan to protect the material.

10 CFR Part 37 requires physical protection of radioactive material when the material is aggregated into a Category 1 or Category 2 quantity of radioactive material. An aggregated quantity refers to the total quantity of radioactive material that can be accessed by defeating a single physical barrier.

Installed SSCs that require dismantling in order to gain access to the material may be considered a barrier, depending on the specific configuration of these elements and the difficulty of removing them. However, once the licensee has dismantled the SSCs, this physical barrier is removed, and the radioactive material in the SSCs may then meet the definition of aggregated (if a category 2 quantity is then accessible by the breach of a single physical barrier). If the material is aggregated, the requirements of 10 CFR Part 37 apply. Consult the implementation guidance in NUREG-2155 for additional information on what qualifies as a physical barrier.

10 CFR Part 37 has specific provisions for "waste" under 10 CFR 37.11(c), which is exempt from Subparts B, C and D of 10 CFR Part 37 and instead, must meet the requirements of 37.11(c) (1)-(4). See the discussion regarding 10 CFR 37.11(c) in NUREG-2155, Rev. 1.

Q16.d: *Are there any problems the NRC has had with reduction of security footprints at decommissioning sites?*

A16.d: Questions have arisen with the reduction of security footprints at decommissioning sites, mostly with uncertainty in implementation of the 10 CFR Part 37 regulations. Licensees have submitted specific questions related to 10 CFR Part 37 that are addressed in the other questions and answers included here.

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11. ABSTRACT (200 words or less)

The intent of this technical report is to provide guidance for applicants and licensees in implementing Title 10 of the *Code of Federal Regulations* (10 CFR) Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material." This document describes methods that the U.S. Nuclear Regulatory Commission finds acceptable for implementing the regulations.

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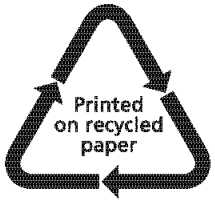

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