

TITLE 32: ENERGY  
CHAPTER II: ILLINOIS EMERGENCY MANAGEMENT AGENCY  
SUBCHAPTER b: RADIATION PROTECTION

PART 337  
PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2  
QUANTITIES OF RADIOACTIVE MATERIAL

SUBPART A: GENERAL INFORMATION

Section	
337.10	Purpose
337.20	Scope
337.30	Incorporations by Reference
337.40	Definitions
337.50	Specific Exemptions

SUBPART B: BACKGROUND INVESTIGATIONS AND  
ACCESS CONTROL PROGRAM

Section	
337.1010	Personnel Access Authorization Requirements for Category 1 or Category 2 Quantities of Radioactive Material
337.1020	Access Authorization Program Requirements
337.1030	Background Investigations
337.1040	Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material
337.1050	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
337.1060	Protection of Information
337.1070	Access Authorization Program Review

SUBPART C: PHYSICAL PROTECTION REQUIREMENTS DURING USE

Section	
337.2010	Security Program
337.2020	General Security Program Requirements
337.2030	LLEA Coordination
337.2040	Security Zones
337.2050	Monitoring, Detection and Assessment
337.2060	Maintenance and Testing

- 337.2070 Requirements for Mobile Devices
- 337.2080 Security Program Review
- 337.2090 Reporting of Events

SUBPART D: PHYSICAL PROTECTION IN TRANSIT

Section

- 337.3010 Additional Requirements for Transfer of Category 1 and Category 2 Quantities of Radioactive Material
- 337.3020 Applicability of Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material During Transit
- 337.3030 Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of Radioactive Material
- 337.3040 Advance Notification of Shipment of Category 1 Quantities of Radioactive Material
- 337.3050 Requirements for Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material During Shipment
- 337.3060 Reporting of Events

SUBPART E: RECORDS

Section

- 337.5010 Form of Records
- 337.5020 Record Retention

SUBPART F: ENFORCEMENT

Section

- 337.6010 Resolution of Conflicting Requirements During Transition Period

337.APPENDIX A Category 1 and Category 2 Radioactive Material

AUTHORITY: Implementing and authorized by Section 10 of the Radiation Protection Act of 1990 [420 ILCS 40/10].

SOURCE: Adopted at 40 Ill. Reg. 4850, effective February 26, 2016; amended at 42 Ill. Reg. 7485, effective April 4, 2018.

SUBPART A: GENERAL INFORMATION

**Section 337.10 Purpose**

This Part contains 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. These requirements provide reasonable assurance of the security of the category 1 or category 2 quantities of radioactive material by protecting these materials from theft, sabotage or diversion. Specific requirements for access, use, transfer and transport of material are included. No provision of this Part authorizes possession of licensed material. The requirements in this Part are in addition to, and not in substitution for, other requirements in 32 Ill. Adm. Code: Chapter II, Subchapters b and d. All applicants for a license and existing licensees are subject to this Part, unless specifically exempted.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.20 Scope**

- a) Subparts B and C apply to any person who possesses or uses at any site, an aggregated category 1 or category 2 quantity of radioactive material.
- b) Subpart D applies to any person who:
  - 1) Transports or delivers a category 1 or category 2 quantity of radioactive material to a carrier for transport in a single shipment; or
  - 2) Imports or exports a category 1 or category 2 quantity of radioactive material.

AGENCY NOTE: The provisions of this Part only apply to the domestic portion of the transport.

- c) Each licensee is responsible for ensuring that persons performing activities under a radioactive material license issued by IEMA comply with 32 Ill. Adm. Code: Chapter II, Subchapters b and d, conditions of the license and any orders issued by IEMA.

### **Section 337.30 Incorporations by Reference**

All rules, standards and guidelines of agencies of the United States or nationally recognized organizations or associations that are incorporated by reference in this Part are incorporated as of the date specified in the reference and do not include any later amendments or additions. Copies of rules, standards or guidelines that have been incorporated by reference are available for public inspection and copying at IEMA, 1035 Outer Park Drive, Springfield, Illinois.

### **Section 337.40 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.

"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.

"Approved individual" means an individual whom the licensee has determined to be trustworthy and reliable for unescorted access in accordance with Subpart B and who has completed the training required by Section 337.2020(c). This does not mean the individual has met the requirements to be an approved authorized user of radioactive material.

"Atomic Energy Act of 1954" means 42 USC 2169.

"Background investigation" means the investigation required by Section 337.1030 and conducted by a licensee or applicant for a license to support the determination of trustworthiness and reliability.

"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.

"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. 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. 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.

"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 that the material is used or stored.

"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.

"FBI" means the Federal Bureau of Investigation.

"Fingerprint Orders" means the orders issued by the U.S. Nuclear Regulatory Commission (NRC) or the legally binding requirements issued by Agreement States that require fingerprints and criminal history records checks for individuals with unescorted access to category 1 and category 2 quantities of radioactive material or safeguards information-modified handling.

"IEMA" means the Illinois Emergency Management Agency.

"License issuing authority" means the licensing agency that issued the license (i.e., the U.S. Nuclear Regulatory Commission, the Illinois Emergency Management Agency or the appropriate agency of another Agreement State).

"Local law enforcement agency" or "LLEA" means a public or private organization that has been approved by a federal, state or local government to carry firearms and make arrests. The LLEA 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.

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

"Movement control center" means an operations center that is remote from transport activity and 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 requests and coordinates appropriate aid.

"No-later-than arrival time" means the date and time that the shipping licensee and receiving licensee have established as the time that 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.

"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 material that is possessed by the licensee. The reviewing official may have unescorted access to the category 1 or category 2 quantities of radioactive material only if his or her job duties require unescorted access to category 1 or category 2 quantities of radioactive material. If the job duties require access to the material, the reviewing official shall also meet the training requirements for use of that radioactive material.

"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.

"Safeguards information" means information not classified as National Security Information or Restricted Data, that specifically identifies a licensee's or applicant's detailed control and accounting procedures for the physical protection of special nuclear material in quantities determined by the U.S. Nuclear Regulatory Commission through order or regulation to be significant to the public health and safety or the common defense and security; detailed security measures (including security plans, procedures and equipment) for the physical protection of source, byproduct, or special nuclear material in quantities determined by NRC through order or regulation to be significant to the public health and safety or the common defense and security; security measures for the physical protection of and location of certain plant equipment vital to the safety of production or utilization facilities; and any other information within the scope of section 147 of the Atomic Energy Act of 1954, as amended, the unauthorized disclosure of which, as determined by NRC through order or regulation, could reasonably be expected to have a significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of sabotage or theft or diversion of source, byproduct, or special nuclear material.

"Safeguards information – modified handling" is the designation or marking applied to safeguards information that NRC has determined requires handling requirements modified from the specific safeguards information handling requirements that are applicable to safeguards information needing a higher level of protection.

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

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

"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.

"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. For this purpose, a determination of trustworthiness and reliability is based upon the results of a background investigation and certification by the reviewing official.

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

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.50 Specific Exemptions**

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; 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. The licensee shall implement the following requirements to secure the radioactive waste:

- a) Use continuous physical barriers that allow access to the radioactive waste only through established access control points;
- b) Use a locked door or gate with monitored alarm at the access control point;
- c) Assess and respond to each actual or attempted unauthorized access to determine whether an actual or attempted theft, sabotage or diversion occurred; and

- d) 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. Immediately 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 IEMA at (217)782-7860 or (800)782-7860. In no case shall the notification to IEMA be made later than one hour after the discovery of any attempted or actual theft, sabotage or diversion.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

SUBPART B: BACKGROUND INVESTIGATIONS AND  
ACCESS CONTROL PROGRAM

**Section 337.1010 Personnel Access Authorization Requirements for Category 1 or Category 2 Quantities of Radioactive Material**

- a) General
- 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.
  - 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.
  - 3) Any licensee that has not previously implemented the Security Orders, legally binding requirements of the Agreement States 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.

AGENCY NOTE: Security orders refers to any order that was issued by the NRC or an amendment to a license issued by IEMA that required fingerprints and an FBI criminal history records check for access to safeguards information, safeguards information-modified handling, or risk significant material.

- b) General Performance Objective



The licensee's access authorization program shall ensure that the individuals specified in subsection (c)(1) are trustworthy and reliable.

- c) Applicability
  - 1) Licensees shall subject the following individuals to an access authorization program:
    - A) 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
    - B) Reviewing officials.
  - 2) Licensees need not subject the categories of individuals listed in Section 337.1050(a) to the investigation elements of the access authorization program identified in Section 337.1030.
  - 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.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.1020 Access Authorization Program Requirements**

- a) Granting Unescorted Access Authorization
  - 1) Licensees shall implement the requirements of this Subpart for granting initial or reinstated unescorted access authorization.
  - 2) Individuals who have been determined to be trustworthy and reliable shall also complete the security training required by Section 337.2020(c) before being allowed unescorted access to category 1 or category 2 quantities of radioactive material.
- b) Reviewing Officials
  - 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 material possessed by the licensee.

- 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. The fingerprints of the named reviewing official shall be taken by a law enforcement agency, federal agency or state agency that provides fingerprinting services to the public or by 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 Section 337.1030(e).
  - 3) Reviewing officials shall be permitted to have unescorted access to category 1 or category 2 quantities of radioactive material if their job duties require unescorted access to category 1 or category 2 quantities of radioactive material as referenced in Section 337.1010(c)(3).
  - 4) Reviewing officials cannot approve other individuals to act as reviewing officials.
  - 5) A reviewing official does not need to undergo a new background investigation before being named by the licensee as the reviewing official if:
    - A) The individual has previously 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
    - B) The individual falls within a category listed in Section 337.1050(a).
- c) Informed Consent
- 1) Licensees may not initiate a background investigation without the informed and signed consent of the subject individual. This consent shall 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 Section 337.1030(d). A signed consent shall be obtained prior to any reinvestigation.

- 2) The subject individual may withdraw his or her consent at any time. Licensees shall inform the individual that:
  - A) 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
  - B) The withdrawal of consent for the background investigation is sufficient cause for denial or termination of unescorted access authorization.
- d) **Personal History Disclosure**

Any individual who is applying for unescorted access authorization shall disclose the personal history information that is required by the licensee's access authorization program for the reviewing official to make a determination of the individual's trustworthiness and reliability. Refusal to provide, or the falsification of, any personal history information required by this Subpart is sufficient cause for denial or termination of unescorted access.
- e) **Determination Basis**
  - 1) The reviewing official shall determine whether to 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.
  - 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.
  - 3) The licensee shall document the basis for concluding whether or not there is reasonable assurance that an individual is trustworthy and reliable.
  - 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 is granted unescorted access authorization.

- 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 after the determination, and take prompt measures to ensure that the individual is unable to have unescorted access to the material.
- f) Procedures. Licensees shall develop, implement and maintain written procedures for implementing the access authorization program. The procedures shall include provisions for:
- 1) The notification of individuals who are denied unescorted access;
  - 2) The review, at the request of the affected individual, of a denial or termination of unescorted access authorization;
  - 3) Ensuring that the individual is informed of the grounds for the denial or termination of unescorted access authorization; and
  - 4) Allowing the individual an opportunity to provide additional relevant information.
- g) Right to Correct and Complete Information
- 1) Prior to any final adverse determination, licensees shall provide each individual subject to this Subpart with the right to complete, correct and explain information obtained as a result of the background investigation. Confirmation of receipt by the individual of this notification shall be maintained by the licensee for a period of one year from the date of the notification.
  - 2) If, after reviewing his or her criminal history record, an individual believes that it is incorrect or incomplete 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 FBI will forward the challenge to the agency that submitted the data and will request that the submitting agency verify or correct the challenged entry. Upon receipt of an official communication directly from the submitting agency that contributed the original information, the FBI Identification Division should make any necessary changes in accordance with the information supplied by that submitting agency. Licensees shall provide at least 10 business days for an individual to initiate action to challenge the results of an FBI criminal history records check after the record is made available for his or her review. The licensee shall make a final adverse determination based upon the criminal history records only after receipt of the FBI's confirmation or correction of the record.

h) Records

- 1) The licensee shall retain documentation regarding the trustworthiness and reliability of individual employees for 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.
- 2) The licensee shall retain a copy of the current access authorization program procedures as a record for 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.
- 3) The licensee shall retain the list of persons approved for unescorted access authorization for 3 years after the list is superseded or replaced.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

**Section 337.1030 Background Investigations**

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 shall encompass at least the 7 years preceding the date of the background investigation or since the individual's 18<sup>th</sup> birthday, whichever is shorter. The background investigation shall include, at a minimum:

- 1) Fingerprinting and an FBI identification and criminal history records check in accordance with Section 337.1040;
  - 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 and/or certificate of birth issued by the state, province or country of birth) and compare the documents to personal information 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 Section 337.1060. Licensees shall certify in writing that the identification was properly reviewed and shall maintain the certification and all related documents for review upon inspection;
  - 3) Employment History 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 or since the individual's 18<sup>th</sup> birthday, whichever is shorter;
  - 4) Verification of Education. Licensees shall verify that the individual participated in the education process during the claimed period; and
  - 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 shall be limited to whether the individual has been and continues to be trustworthy and reliable.
- b) The licensee shall, to the extent possible, obtain independent information to corroborate that provided by the individual (e.g., seek references not supplied by the individual).
  - c) 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 (no less than 10 business days after 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.

d) Grandfathering

- 1) Individuals who were previously 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.
- 2) Individuals who have been determined to be trustworthy and reliable under the provisions of a security order 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 a security order. These individuals shall be subject to the reinvestigation requirement.

AGENCY NOTE: Security order, in this context, refers to any order that was issued by the NRC or an amendment to a license issued by IEMA that required fingerprints and an FBI criminal history records check for access to safeguards information, safeguards information – modified handling or risk significant material.

e) 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 Section 337.1040. The reinvestigations shall be completed within 10 years after the date that these elements were last completed.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

**Section 337.1040 Requirements for Criminal History Records Checks of Individuals  
Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material**

- a) General Performance Objective and Requirements
- 1) Except for those individuals listed in Section 337.1050 and those individuals grandfathered under Section 337.1030(d), 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 NRC 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 material for that individual.
  - 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.
  - 3) Fingerprinting is not required if:
    - A) A licensee is reinstating an individual's unescorted access authorization to category 1 or category 2 quantities of radioactive material;
    - B) The individual returns to the same facility that granted unescorted access authorization within 365 days after termination of his or her unescorted access authorization; and
    - C) The previous unescorted access authorization was terminated under favorable conditions.
  - 4) Fingerprints are not required 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 10 CFR 73. An existing criminal history records check file may be transferred, in accordance with Section 337.1060(c), to the licensee asked to grant unescorted access.
  - 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 material.

b) Prohibitions

- 1) Licensees may not base a final determination to deny an individual unescorted access authorization to category 1 or category 2 quantities of radioactive material solely on the basis of information received from the FBI involving:
  - A) An arrest more than one year old in which there is no information of the disposition of the case; or
  - B) An arrest that resulted in dismissal of the charge or an acquittal.
- 2) Licensees may not use information received from a criminal history records check obtained under this Subpart in a manner that would infringe upon the rights of any individual under the First Amendment to the Constitution of the United States nor shall licensees use the information in any way that would discriminate among individuals on the basis of race, religion, national origin, gender or age.

c) Procedures for Processing of Fingerprint Checks

- 1) For the purpose of complying with this Subpart, licensees shall use an appropriate method listed in 10 CFR 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, ORIMDNRCOOZ), 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.

AGENCY NOTE: Copies of these forms may be obtained by writing the Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001, by calling (630)829-9565 or by email to [FORMS.Resource@nrc.gov](mailto:FORMS.Resource@nrc.gov).

- 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".

Combined payment for multiple applications is acceptable. The amount of the fingerprint check application fee is available on NRC's website. To find the current fee amount, go to the Electronic Submittals page at <http://www.nrc.gov/site-help/e-submittals.html> and see the link for the Criminal History Program under Electronic Submission Systems.

AGENCY NOTE: For guidance on making electronic payments, contact the Security Branch, Division of Facilities and Security at (301)415-1491 .

- 3) NRC will forward to the submitting licensee all data received from the FBI as a result of the licensee's applications for criminal history records checks.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

**Section 337.1050 Relief from Fingerprinting, Identification, Criminal History Records Checks and Other Elements of Background Investigations for Designated Categories of Individuals Permitted Unescorted Access to Certain Radioactive Material**

- 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 material:
  - 1) An employee of the NRC or of the Executive Branch of the U.S. government who has undergone fingerprinting for a prior U.S. government criminal history records check;
  - 2) A member of Congress;
  - 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;
  - 4) The Governor of Illinois or his or her designated State employee representative;
  - 5) Federal, State of Illinois or local law enforcement personnel;
  - 6) The IEMA Director and State Homeland Security Advisor or their designated State employee representatives;

- 7) IEMA employees conducting security inspections on behalf of the NRC under an agreement executed under section 274.i of the Atomic Energy Act of 1954;
  - 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;
  - 9) Emergency response personnel who are responding to an emergency;
  - 10) Commercial vehicle drivers for road shipments of category 1 and category 2 quantities of radioactive material;
  - 11) Package handlers at transportation facilities such as freight terminals and railroad yards;
  - 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 shall 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 authorization to category 1 or category 2 quantities of radioactive material; and
  - 13) Any individual employed by a service provider licensee that 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 shall 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 authorization to category 1 or category 2 quantities of radioactive material.
- 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 shall 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:

- 1) National Agency Check;
- 2) Transportation Worker Identification Credentials (TWIC) under 49 CFR 1572;
- 3) Bureau of Alcohol, Tobacco, Firearms and Explosives background check and clearances under 27 CFR 555;
- 4) Health and Human Services security risk assessments for possession and use of select agents and toxins under 42 CFR 73;
- 5) Hazardous material security threat assessment for hazardous material endorsement to commercial driver's license under 49 CFR 1572; and
- 6) Customs and Border Protection's Free and Secure Trade (FAST) Program.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.1060 Protection of Information**

- a) Each licensee who obtains background information on an individual under this Subpart shall establish and maintain a system of files and written procedures for protection of the record and the personal information from unauthorized disclosure.
- b) The licensee shall not disclose the record or personal information collected and maintained to persons other than the subject individual, his or her representative, or 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. No individual authorized to have access to the information shall disseminate the information to any other individual who does not have a need to know.
- c) The personal information obtained on an individual from a background investigation may be provided to another licensee:
  - 1) Upon the individual's written request to the licensee holding the data to disseminate the information contained in his or her file; and

- 2) The recipient licensee verifies information such as name, date of birth, social security number, gender and other applicable physical characteristics of the individual.
- d) The licensee shall make background investigation records obtained under this Subpart available for examination by an authorized representative of IEMA to determine compliance with the law.
- e) The licensee shall retain all fingerprint and criminal history records received from the FBI, including data indicating no record, or a copy of these records if the individual's file has been transferred. The records shall be retained for 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

#### **Section 337.1070 Access Authorization Program Review**

- a) Each licensee shall be responsible for the continuing effectiveness of the access authorization program. Each licensee shall ensure that access authorization programs are reviewed to confirm compliance with the requirements of this Subpart and that comprehensive actions are taken to correct any noncompliance that is identified. The review program shall evaluate all program performance objectives and requirements. Each licensee shall periodically, not to exceed 12 months, review the access program content and implementation.
- b) The results of the reviews, along with any recommendations, shall be documented. Each review report shall identify conditions that are adverse to the proper performance of the access authorization program and the cause of those conditions. When appropriate, the report shall recommend corrective actions and identify 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 when indicated.
- c) Review records shall be maintained for 3 years.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

#### **SUBPART C: PHYSICAL PROTECTION REQUIREMENTS DURING USE**

#### **Section 337.2010 Security Program**

- a) Applicability

- 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.
  - 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.
  - 3) Any licensee that has not previously implemented the security requirements or been subject to the provisions of Subpart C shall provide written notification to IEMA at the address specified in 32 Ill. Adm. Code 310.110 at least 90 days before aggregating radioactive material to a quantity that equals or exceeds the category 2 threshold.
- b) **General Performance Objective**  
Each licensee shall establish, implement and maintain a security program that is designed to monitor and, without delay, detect, assess and respond to an actual or attempted unauthorized access to category 1 or category 2 quantities of radioactive material.
- c) **Program Features**  
Each licensee's security program shall include the program features, as appropriate, described in Sections 337.2020 through 337.2080.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.2020 General Security Program Requirements**

- a) **Security Plan**
- 1) Each licensee identified in Section 337.2010(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 shall, at a minimum:
    - A) Describe the measures and strategies used to implement the requirements of this Subpart; and

- 
- B) Identify the security resources, equipment and technology used to satisfy the requirements of this Subpart.
- 2) The security plan shall be reviewed and approved by the individual with overall responsibility for the security program.
  - 3) A licensee shall revise its security plan as necessary to ensure the effective implementation of this Part. The licensee shall ensure that:
    - A) The revision has been reviewed and approved by the individual with overall responsibility for the security program; and
    - B) The affected individuals are instructed on the revised plan before the changes are implemented.
  - 4) The licensee shall retain a copy of the current security plan as a record 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 portion for 3 years after the record is superseded.
- b) Implementing Procedures
- 1) The licensee shall develop and maintain written procedures that document how the requirements of this Subpart and the security plan will be met.
  - 2) The implementing procedures and revisions to these procedures shall be approved in writing by the individual with overall responsibility for the security program.
  - 3) The licensee shall retain a copy of the current procedure as a record for 3 years after the procedure is no longer needed. Superseded portions of the procedure shall be retained for 3 years after the record is superseded.
- c) Training
- 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 shall include:
    - A) The licensee's security program and procedures to secure category 1 or category 2 quantities of radioactive material and the purposes and functions of the security measures employed;

- B) The responsibility to promptly report to the licensee any condition that causes or may cause a violation of this Part;
  - C) The responsibility of the licensee to promptly report to the LLEA and licensee any actual or attempted theft, sabotage or diversion of category 1 or category 2 quantities of radioactive material; and
  - D) The appropriate response to security alarms.
- 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 shall be commensurate with the individual's potential involvement in the security of category 1 or category 2 quantities of radioactive material.
- 3) Refresher training shall be provided at a frequency not to exceed 12 months and when significant changes have been made to the security program. This training shall include:
- A) Review of the training requirements of subsection (c) and any changes made to the security program since the last training;
  - B) Reports on any relevant security issues, problems and lessons learned;
  - C) Relevant results of IEMA inspections; and
  - D) Relevant results of the licensee's program review and testing and maintenance.
- 4) The licensee shall maintain records of the initial and refresher training for 3 years from the date of the training. The training records shall include dates of the training, topics covered, a list of licensee personnel in attendance and related information.
- d) Protection of Information
- 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.

- 2) Efforts to limit access shall include the development, implementation and maintenance of written policies and procedures for controlling access to, and for proper handling and protection against unauthorized disclosure of, the security plan and implementing procedures.
- 3) Before granting an individual access to the security plan or implementing procedures, licensees shall:
  - A) Evaluate an individual's need to know the security plan or implementing procedures; and
  - B) 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 shall 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 Section 337.1030(a)(2) through (a)(5), (b) and (c).
- 4) Licensees need not subject the following individuals to the background investigation elements for protection of information:
  - A) The categories of individuals listed in Section 337.1050(a); or
  - B) Security service provider employees, if written verification that the employee has been determined to be trustworthy and reliable, by the required background investigation in Section 337.1030(a)(2) through (a)(5), (b) and (c) has been provided by the security service provider.
- 5) The licensee shall document the basis for concluding that an individual is trustworthy and reliable and should be granted access to the security plan or implementing procedures.
- 6) Licensees shall maintain a list of persons currently approved for access to the security plan or implementing procedures. When a licensee determines that a person no longer needs access to the security plan or implementing procedures, 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 business days, and take prompt measures to ensure that the individual is unable to obtain the security plan or implementing procedures.

- 7) When not in use, the licensee shall store its security plan and implementing procedures in a manner designed to prevent unauthorized access. Information stored in nonremovable electronic form shall be password protected.
- 8) The licensee shall retain as a record for 3 years after the document is no longer needed:
  - A) A copy of the information protection procedures; and
  - B) The list of individuals approved for access to the security plan or implementing procedures.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.2030 LLEA Coordination**

- 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 shall include:
  - 1) A description of the facilities and the category 1 and category 2 quantities of radioactive material, along with a description of the licensee's security measures that have been implemented to comply with this Subpart; and
  - 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 radioactive material.
- b) The licensee shall notify IEMA within 3 business days if:
  - 1) The LLEA has not responded to the request for coordination within 60 days of the coordination request; or
  - 2) The LLEA notifies the licensee that the LLEA does not plan to participate in coordination activities.

- c) The licensee shall document its efforts to coordinate with the LLEA. The documentation shall be kept for 3 years.
- 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.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.2040 Security Zones**

- a) Licensees shall ensure that all aggregated category 1 and category 2 quantities of radioactive material are used or stored within licensee-established security zones. Security zones may be permanent or temporary.
- b) Temporary security zones shall be established as necessary to meet the licensee's transitory or intermittent business activities, such as periods of maintenance, source delivery and source replacement.
- c) Security zones shall, at a minimum, allow unescorted access only to approved individuals through:
  - 1) Isolation of category 1 and category 2 quantities of radioactive material 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;
  - 2) Direct control of the security zone by approved individuals at all times; or
  - 3) A combination of continuous physical barriers and direct control.
- d) For category 1 quantities of radioactive material during periods of maintenance, source receipt, preparation for shipment, installation or source removal or exchange, the licensee shall, at a minimum, provide sufficient individuals approved for unescorted access to maintain continuous surveillance of sources in temporary security zones and in any security zone where physical barriers or intrusion detection systems have been disabled to allow those activities.
- e) Individuals not approved for unescorted access to category 1 or category 2 quantities of radioactive material shall be escorted by an approved individual when in a security zone.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.2050 Monitoring, Detection and Assessment**

- a) Monitoring and Detection
  - 1) Licensees shall establish and maintain the capability to continuously monitor and detect, without delay, all unauthorized entries into its security zones. Licensees shall provide the means to maintain continuous monitoring and detection capability in the event of a loss of the primary power source or provide for an alarm and response in the event of a loss of this capability to continuously monitor and detect unauthorized entries.
  - 2) Monitoring and detection shall be performed by:
    - A) A monitored intrusion detection system that is linked to an onsite or offsite central monitoring facility;
    - B) Electronic devices for intrusion detection alarms that will alert nearby facility personnel;
    - C) A monitored video surveillance system;
    - D) Direct visual surveillance by approved individuals located within the security zone; or
    - E) Direct visual surveillance by a licensee-designated individual located outside the security zone.
  - 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 shall provide:
    - A) For category 1 quantities of radioactive material, immediate detection of any attempted unauthorized removal of the radioactive material from the security zone. Immediate detection capability shall be provided by:
      - i) Electronic sensors linked to an alarm;
      - ii) Continuous monitored video surveillance; or
      - iii) Direct visual surveillance.

- B) For category 2 quantities of radioactive material, weekly verification through physical checks, tamper indicating devices, use or other means to ensure that the radioactive material is present.
- b) **Assessment**  
Licensees shall immediately assess each actual or attempted unauthorized entry into the security zone to determine whether the unauthorized access was an actual or attempted theft, sabotage or diversion.
  - c) **Personnel Communications and Data Transmission**  
For personnel and automated or electronic systems supporting the licensee's monitoring, detection and assessment systems, licensees shall:
    - 1) Maintain continuous capability for personnel communication and electronic data transmission and processing among site security systems; and
    - 2) Provide an alternative communication capability for personnel and an alternative data transmission and processing capability in the event of a loss of the primary means of communication or data transmission and processing. Alternative communications and data transmission systems may not be subject to the same failure modes as the primary systems.
  - d) **Response**  
Licensees shall immediately respond to any actual or attempted unauthorized access to the security zones or actual or attempted theft, sabotage or diversion of category 1 or category 2 quantities of radioactive material at licensee facilities or temporary job sites. For any unauthorized access involving an actual or attempted theft, sabotage or diversion of category 1 or category 2 quantities of radioactive material, the licensee's response shall include requesting, without delay, an armed response from the LLEA.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.2060 Maintenance and Testing**

- 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 shall be inspected and tested for operability and performance at the manufacturer's suggested frequency. If there is no manufacturer's suggested frequency, the testing shall be performed at least annually, not to exceed 12 months.

- b) The licensee shall maintain records on the maintenance and testing activities for 3 years.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.2070 Requirements for Mobile Devices**

Each licensee that possesses mobile devices containing category 1 or category 2 quantities of radioactive material shall:

- 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
- 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.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.2080 Security Program Review**

- a) Each licensee shall be responsible for the continuing effectiveness of the security program. Each licensee shall ensure that the security program is reviewed to confirm compliance with the requirements of this Subpart and that comprehensive actions are taken to correct any noncompliance that is identified. The review shall include the radioactive material security program content and implementation. Each licensee shall periodically, not to exceed 12 months, review the security program content and implementation.
- b) The results of the review, along with any recommendations, shall be documented. Each review report shall identify conditions that are adverse to the proper performance of the security program and the cause of the conditions. When appropriate, the report shall recommend corrective actions and identify 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 when indicated.

- c) The licensee shall maintain the review documentation for 3 years.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.2090 Reporting of Events**

- 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. Immediately 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 IEMA at (217)782-7860 or (800)782-7860. In no case shall the notification to IEMA be later than one hour after the discovery of any attempted or actual theft, sabotage or diversion.
- b) The licensee shall assess any suspicious activity related to possible theft, sabotage or diversion of a category 1 or category 2 quantity of radioactive material and notify the LLEA as appropriate. As soon as possible, but not later than one hour after notifying the LLEA, the licensee shall notify IEMA at (217)782-7860 or (800)782-7860.
- c) **Written Reports.** A licensee required to make a notification pursuant to subsection (a) or (b) shall, within 30 days after making the notification, submit a written report to IEMA regarding the suspicious activity or the actual or attempted theft, sabotage or diversion. The written report shall include sufficient information for IEMA analysis and evaluation, including:
- 1) A description of the source of radiation involved, including the kind, quantity and chemical and physical form;
  - 2) A description of the circumstances under which the actual or attempted theft, sabotage or diversion of a category 1 or category 2 quantity of radioactive material occurred;
  - 3) A statement of disposition, or probable disposition, of the source of radiation involved;
  - 4) Exposures of individuals to radiation, circumstances under which the exposures occurred, and the possible total effective dose equivalent to persons in unrestricted areas;

- 5) Actions that have been taken, or will be taken, to recover the source of radiation; and
  - 6) Corrective actions taken, or that will be taken, to protect against a recurrence of a theft, sabotage or diversion of a category 1 or category 2 quantity of radioactive material.
- d) Subsequent to filing the written report, the licensee shall also report any additional substantive information on the actual or attempted theft, sabotage or diversion of a category 1 or category 2 quantity of radioactive material within 30 days after the licensee learns of that information.
  - e) The licensee shall prepare any report filed with IEMA pursuant to this Section so that names of individuals who may have received exposure to radiation are stated in a separate and detachable portion of the written report.

AGENCY NOTE: Notification under this Part satisfies the requirements of 32 Ill. Adm. Code 340.1205 and 340.1210 for category 1 and category 2 quantities of radioactive material. Licensees should be aware that there are additional reporting requirements in 32 Ill. Adm. Code 340.1220 for other events involving radioactive material.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

#### SUBPART D: PHYSICAL PROTECTION IN TRANSIT

### **Section 337.3010 Additional Requirements for Transfer of Category 1 and Category 2 Quantities of Radioactive Material**

A licensee transferring category 1 or category 2 quantities of radioactive material to a licensee of the NRC or another Agreement State shall meet the license verification provisions listed in this Section instead of those listed in 32 Ill. Adm. Code 330.400.

- a) Any licensee transferring category 1 quantities of radioactive material to a licensee of the NRC or an Agreement State, prior to conducting that transfer, shall verify with 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.



- b) Any licensee transferring category 2 quantities of radioactive material to a licensee of the NRC or an Agreement State, prior to conducting that transfer, shall verify with 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.
- c) In an emergency in which 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 shall include the license number, current revision number, issuing authority, expiration date and, for category 1 shipments, the authorized address. The licensee shall keep a copy of the certification. The certification shall 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.
- d) The transferor shall keep a copy of the verification documentation as a record for 3 years.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.3020 Applicability of Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material During Transit**

- a) For shipments of category 1 quantities of radioactive material, each shipping licensee shall comply with the requirements for physical protection contained in Sections 337.3030(a) and (e), 337.3040, 337.3050(a)(1), (b)(1) and (c) and 337.3060(a), (c), (e), (g) and (h).
- b) For shipments of category 2 quantities of radioactive material, each shipping licensee shall comply with the requirements for physical protection contained in Sections 337.3030(b) through (e), 337.3050(a)(2), (a)(3), (b)(2) and (c), and 337.3060(b), (d), (f), (g) and (h). For those shipments of category 2 quantities of radioactive material that meet the criteria of 10 CFR 71.97(b), the shipping licensee shall also comply with the advance notification provisions of 10 CFR 71.97.
- c) The shipping licensee shall be responsible for meeting the requirements of this Subpart unless the receiving licensee has agreed in writing to arrange for the in-transit physical protection required under this Subpart.

- d) Each licensee that imports or exports category 1 quantities of radioactive material shall comply with the requirements for physical protection during transit contained in Sections 337.3030(a)(2) and (e), 337.3040, 337.3050(a)(1), (b)(1) and (c), and 337.3060(a), (c), (e), (g) and (h) for the domestic portion of the shipment.
- 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 Sections 337.3050(a)(2), (a)(3) and (b)(2) and 337.3060(b), (d), (f), (g) and (h) for the domestic portion of the shipment.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.3030 Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of Radioactive Material**

- a) Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 1 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage shall:
  - 1) Preplan and coordinate shipment arrival and departure times with the receiving licensee;
  - 2) Preplan and coordinate shipment information with the governor, or the governor's designee, of any state through which the shipment will pass to:
    - A) Discuss the state's intention to provide law enforcement escorts; and
    - B) Identify safe havens; and
  - 3) Document the preplanning and coordination activities.
- b) Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 2 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage shall coordinate the shipment no-later-than arrival time and the expected shipment arrival with the receiving licensee. The licensee shall document the coordination activities.
- 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.

- 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 subsection (b), shall promptly notify the receiving licensee of the new no-later-than arrival time.
- e) The licensee shall retain a copy of the documentation for preplanning and coordination, and any revision thereof, as a record for 3 years.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.3040 Advance Notification of Shipment of Category 1 Quantities of Radioactive Material**

As specified in subsections (a) and (b), each licensee shall provide advance notification to IEMA 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.

- a) Procedures for Submitting Advance Notification
  - 1) The notification shall be made to IEMA and to the office of each appropriate governor or governor's designee.
    - A) Notifications for the Governor of the State of Illinois and IEMA shall be sent to Illinois Emergency Management Agency, ATTN: Radiological Field Services Unit Supervisor, Bureau of Radiation Safety, 1301 Knotts Street, Springfield IL 62703. The notifications may also be made by email or by facsimile. For the correct email or facsimile number, call, prior to sending notification, (217)782-7860 or (800)782-7860.
    - B) The contact information, including telephone and mailing addresses, of governors and governors' designees, is available on NRC's website at <https://scp.nrc.gov/special/designee.pdf>. A list of the contact information is also available upon request from the Director, Division of Material Safety, State, Tribal, and Rulemaking Programs, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

- 2) A notification delivered by mail shall be postmarked at least 7 calendar days before transport of the shipment commences at the shipping facility.
  - 3) A notification delivered by any means other than mail must reach IEMA at least 4 business days before the transport of the shipment commences and must reach the office of a governor or the governor's designee at least 4 business days before transport of a shipment within or through a state.
- b) Information to be Furnished in Advance Notification of Shipment  
Each advance notification of shipment of category 1 quantities of radioactive material shall contain the following information, if available at the time of notification:
- 1) The name, address and telephone number of the shipper, carrier and receiver of the category 1 radioactive material;
  - 2) The license numbers of the shipper and receiver;
  - 3) A description of the radioactive material contained in the shipment, including the radionuclides and quantity;
  - 4) The point of origin of the shipment and the estimated time and date that the shipment will commence;
  - 5) The estimated time and date that the shipment is expected to enter each state along the route;
  - 6) The estimated time and date of arrival of the shipment at the destination; and
  - 7) A point of contact, with a telephone number, for current shipment information.
- c) Revision Notice
- 1) The licensee shall provide any information not previously available at the time of the initial notification as soon as the information becomes available, but not later than commencement of the shipment, to the governor of each state, or the governor's designee, and to IEMA.
  - 2) A licensee shall promptly notify the governor of each state, or the governor's designee, of any changes to the information provided in

accordance with subsections (b) and (c)(1). The licensee shall also immediately notify IEMA of the changes.

- d) **Cancellation Notice**  
Each licensee that 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 IEMA. 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.
- e) **Records**  
The licensee shall retain a copy of the advance notification and any revision and cancellation notices as a record for 3 years.
- f) **Protection of Information**  
State officials, State employees and any other individuals, whether or not licensees of NRC or an Agreement State, who receive schedule information of the kind specified in subsection (b) shall protect that information against unauthorized disclosure as specified in Section 337.2020(d).

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.3050 Requirements for Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material During Shipment**

- a) **Shipments by Road**
  - 1) Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 1 quantity of radioactive material shall:
    - A) Ensure that movement control centers are established that maintain position information from a remote location. These control centers shall 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.
    - B) 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.

- 
- C) 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 shall provide positive confirmation of the location, status and control over the shipment. The movement control center shall 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 shall include, but are not limited to, the identification of and contact information for the appropriate LLEA along the shipment route.
  - D) 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 U.S. Department of Transportation's Federal Motor Carrier Safety Administration. The accompanying individual may be another driver.
  - E) Develop written normal and contingency procedures to address:
    - i) Notifications to the communication center and law enforcement agencies;
    - ii) Communication Protocols  
Communication protocols that 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;
    - iii) Loss of communications; and
    - iv) Responses to an actual or attempted theft or diversion of a shipment.
  - F) 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.
- 2) Each licensee that transports category 2 quantities of radioactive material shall maintain constant control and/or surveillance during transit and have

the capability for immediate communication to summon appropriate response or assistance.

- 3) Each licensee who delivers to a carrier for transport, in a single shipment, a category 2 quantity of radioactive material shall:
  - A) 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 shall 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;
  - B) 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
  - C) Use carriers that have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

b) Shipments by Rail

- 1) Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 1 quantity of radioactive material shall:
  - A) 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 shall include, but are not limited to, the identification of and contact information for the appropriate LLEA along the shipment route; and
  - B) Ensure that periodic reports to the communications center are made at preset intervals.

- 2) Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 2 quantity of radioactive material shall:
  - A) 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 shall 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;
  - B) 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
  - C) Use carriers that have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.
- 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 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.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

### **Section 337.3060 Reporting of Events**

- a) The shipping licensee shall notify the appropriate LLEA and IEMA's 24-hour emergency number at (217)782-7860 or (800)782-7860 within one hour after 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 Section 337.3050(c), the shipping licensee will provide agreed upon updates on the status of the investigation to the IEMA 24-hour emergency number.
- b) The shipping licensee shall notify IEMA's 24-hour emergency number (217)782-7860 or (800)782-7860 within 4 hours after its determination that a shipment of



category 2 quantities of radioactive material is lost or missing. If, 24 hours after its determination that the shipment is lost or missing, the radioactive material has not been located and secured, the licensee shall immediately notify IEMA's 24-hour emergency number.

- c) The shipping licensee shall notify the designated LLEA along the shipment route, as soon as possible after 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 category 1 quantities of radioactive material. As soon as possible after notifying the LLEA, the licensee shall notify IEMA's 24-hour emergency number at (217)782-7860 or (800)782-7860 upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment, of category 1 quantities of radioactive material.
- d) The shipping licensee shall notify IEMA's 24-hour emergency number at (217)782-7860 or (800)782-7860 as soon as possible after discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment, of a category 2 quantity of radioactive material.
- e) The shipping licensee shall notify the LLEA and IEMA's 24-hour emergency number as soon as possible after recovery of any lost or missing category 1 quantities of radioactive material.
- f) The shipping licensee shall notify IEMA's 24-hour emergency number as soon as possible after recovery of any lost or missing category 2 quantities of radioactive material.
- g) **Written Reports**  
Each licensee required to make a notification pursuant to subsections (a) through (d) shall, within 30 days after making that notification, submit a written report to IEMA for incidents involving an actual or attempted theft, loss or diversion of radioactive material. A written report is not required for notifications on suspicious activities reported pursuant to subsections (c) and (d). The written report shall include:
  - 1) A description of the licensed material involved, including kind, quantity and chemical and physical form;
  - 2) A description of the circumstances under which the actual or attempted loss, theft or diversion occurred;
  - 3) A statement of disposition, or probable disposition, of the licensed material involved;

- 4) Actions that have been taken, or that will be taken, to recover the material; and
  - 5) Corrective actions taken, or will be taken, to ensure against a recurrence of a loss, theft or diversion of licensed material.
- h) Subsequent to filing the written report, the licensee shall also report any additional substantive information on the actual or attempted loss, theft or diversion within 30 days after the licensee learns of the information.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

#### SUBPART E: RECORDS

##### **Section 337.5010 Form of Records**

Each record required by this Part shall be legible throughout the retention period specified. 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 shall include all pertinent information such as stamps, initials and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

##### **Section 337.5020 Record Retention**

Licensees shall maintain the records that are required in this Part for the period specified by the appropriate section. If a retention period is not otherwise specified, these records shall be retained until IEMA terminates the facility's license pursuant to 32 Ill. Adm. Code 330.325. IEMA may, in writing, approve or require a shorter or longer retention period, depending on whether the records are needed to determine compliance.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

#### SUBPART F: ENFORCEMENT

##### **Section 337.6010 Resolution of Requirements During Transition Period**

If this Part conflicts with the licensee's radiation safety program as identified in its license or legally binding orders, this Part shall apply, unless the statements, representations, conditions

---

and procedures in the license are more restrictive. However, if that licensee exercises its privilege to amend its license, the portion amended must comply with this Part.

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)

**Section 337.APPENDIX A Category 1 and Category 2 Radioactive Material****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/Be	60	1,620	0.6	16.2
Californium-252	20	540	0.2	5.40
Cobalt-60	30	810	0.3	8.10
Curium-244	50	1,350	0.5	13.5
Cesium-137	100	2,700	1	27.0
Gadolinium-153	1,000	27,000	10	270
Iridium-192	80	2,160	0.8	21.6
Plutonium-238	60	1,620	0.6	16.2
Plutonium-239/Be	60	1,620	0.6	16.2
Promethium-147	40,000	1,080,000	400	10,800
Radium-226	40	1,080	0.4	10.8
Selenium-75	200	5,400	2	54.0
Strontium-90	1,000	27,000	10	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3	81.0

Note: Calculations Concerning Multiple Sources or Multiple Radionuclides

The "sum of fractions" methodology for evaluating combinations of multiple sources or multiple radionuclides is to be used in determining whether a location meets or exceeds the threshold and is thus subject to the requirements.

- I. If multiple sources of the same radionuclide and/or multiple radionuclides are aggregated at a location, the sum of the ratios of the total activity of each of the radionuclides shall be determined to verify whether the activity at the location is less than the category 1 or category 2 thresholds of Table 1, as appropriate. If the calculated sum of the ratios, using the equation below, is greater than or equal to 1.0, then the applicable requirements apply.
- II. First determine the total activity for each radionuclide from Table 1. This is done by adding the activity of each individual source, 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 1 in the numerator of the equation and the corresponding threshold activity from Table 1 in the denominator of the equation. Calculations shall be performed in metric values (i.e., TBq) and the numerator and denominator values shall be in the same units.

$$\sum_1^N \left[ \frac{R1}{AR1} + \frac{R2}{AR2} + \frac{RN}{ARN} \right] \geq 1.0$$

where:

R1 = total activity for radionuclide 1

R2 = total activity for radionuclide 2

RN = total activity for radionuclide n

AR1 = activity threshold for radionuclide 1

AR2 = activity threshold for radionuclide 2

ARN = activity threshold for radionuclide n

(Source: Amended at 42 Ill. Reg. 42 Ill. Reg. 7485, effective April 4, 2018)