

641—40.54(136C) Security and control of licensed radioactive material in quantities of concern.

40.54(1) The following increased controls apply to licensees that, at any given time, possess radioactive sources greater than or equal to the quantities of concern of radioactive material defined in Appendix G.

40.54(2) In order to ensure the safe handling, use, and control of licensed material in use and in storage, each licensee shall control access at all times to radioactive material quantities of concern and devices containing such radioactive material (devices), and limit access to such radioactive material and devices to only approved individuals who require access to perform their duties.

a. The licensee shall allow only trustworthy and reliable individuals, approved in writing by the licensee, to have unescorted access to radioactive material quantities of concern and devices. The licensee shall approve for unescorted access only those individuals with job duties that require access to such radioactive material and devices. Personnel who require access to such radioactive material and devices to perform a job duty, but who are not approved by the licensee for unescorted access, must be escorted by an approved individual.

b. For individuals employed by the licensee for three years or less, and for nonlicensee personnel, such as physicians, physicists, housekeeping personnel, and security personnel under contract, trustworthiness and reliability shall be determined, at a minimum, by verifying employment history, education, and personal references. The licensee shall also, to the extent possible, obtain independent information to corroborate that information provided by the employee (i.e., seek references not supplied by the individual). For individuals employed by the licensee for longer than three years, trustworthiness and reliability shall be determined, at a minimum, by a review of the employees' employment history with the licensee.

c. Service providers shall be escorted unless determined to be trustworthy and reliable by an NRC-required background investigation as an employee of a manufacturing and distribution (M&D) licensee. Written verification attesting to or certifying the person's trustworthiness and reliability shall be obtained from the manufacturing and distribution licensee providing the service.

d. The licensee shall document the basis for concluding that there is reasonable assurance that an individual granted unescorted access is trustworthy and reliable, and does not constitute an unreasonable risk for unauthorized use of radioactive material quantities of concern. The licensee shall maintain a list of persons approved by the licensee for unescorted access to such radioactive material and devices.

40.54(3) In order to ensure the safe handling, use, and control of licensed material in use and in storage, each licensee shall have a documented program to monitor and immediately detect, assess, and respond to unauthorized access to radioactive material quantities of concern and devices. Enhanced monitoring shall be provided during periods of source delivery or shipment, when the delivery or shipment exceeds 100 times the Appendix G values.

a. The licensee shall respond immediately to any actual or attempted theft, sabotage, or diversion of such radioactive material or of the devices. The response shall include requesting assistance from a local law enforcement agency (LLEA).

b. The licensee shall have a prearranged plan with the LLEA for assistance in response to an actual or attempted theft, sabotage, or diversion of such radioactive material or of the devices which is consistent in scope and timing with realistic potential vulnerability of the sources containing such radioactive material. The prearranged plan shall be updated when changes to the facility design or operation affect the potential vulnerability of the sources. Prearranged LLEA coordination is not required for temporary job sites.

c. The licensee shall have a dependable means to transmit information between and among the various components used to detect and identify an unauthorized intrusion, to inform the assessor, and to summon the appropriate responder.

d. After initiating an appropriate response to any actual or attempted theft, sabotage, or diversion of radioactive material or of the devices, the licensee shall, as promptly as possible, notify the bureau of radiological health at (515)281-3478 during normal working hours of 7:30 a.m. to 4:30 p.m., Monday through Friday. After hours and on holidays, the licensee shall call (515)323-4360 and request the homeland security and emergency management duty officer.

e. The licensee shall maintain documentation describing each instance of unauthorized access and any necessary corrective actions to prevent future instances of unauthorized access.

40.54(4) In order to ensure the safe handling, use, and control of licensed material in transportation for domestic highway and rail shipments by a carrier other than the licensee for quantities that equal or exceed those in Appendix G but are less than 100 times Appendix G quantities, per consignment, the licensee shall:

- a.* Use carriers that:
 - (1) Use package tracking systems;
 - (2) Implement methods to ensure trustworthiness and reliability of drivers;
 - (3) Maintain either constant control or surveillance during transit;
 - (4) Have the capability for immediate communication to summon appropriate response or assistance;
- b.* Verify and document that the carrier employs the measures listed in paragraph “*a*”;
- c.* Contact the recipient to coordinate the expected arrival time of the shipment;
- d.* Confirm receipt of the shipment; and
- e.* Initiate an investigation to determine the location of the licensed material if the shipment does not arrive on or about the expected arrival time. When, through the course of the investigation, it is determined that the shipment has become lost, stolen, or missing, the licensee shall immediately notify the bureau of radiological health at (515)281-3478 during normal working hours of 7:30 a.m. to 4:30 p.m., Monday through Friday. After hours and on holidays, the licensee shall call (515)323-4360 and request the homeland security and emergency management duty officer. If, after 24 hours of investigating, the location of the material still cannot be determined, the radioactive material shall be deemed missing and the licensee shall immediately notify the bureau of radiological health.

40.54(5) For domestic highway and rail shipments, prior to shipping licensed radioactive material that exceeds 100 times the quantities in Appendix G per consignment, the licensee shall:

- a.* Notify the NRC (Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555) in writing, at least 90 days prior to the anticipated date of shipment. The NRC will issue the Order to implement the Additional Security Measures (ASMs) for the transportation of Radioactive Material Quantities of Concern (RAM QC). The licensee shall not ship the material until the ASMs for the transportation of RAM QC are implemented or the licensee is notified otherwise, in writing, by the NRC.
- b.* Once the licensee has implemented the ASMs for the transportation of RAM QC, the notification requirements of 40.54(5) “*a*” shall not apply to future shipments of licensed radioactive material that exceed 100 times the Appendix G quantities. The licensee shall implement the ASMs for the transportation of RAM QC.

40.54(6) If a licensee employs an M&D licensee to take possession of the licensed radioactive material and ship it under the M&D licensee’s M&D license, the requirements of 40.54(4) and 40.54(5) above shall not apply.

40.54(7) If the licensee is to receive radioactive material greater than or equal to the Appendix G quantities, per consignment, the licensee shall coordinate with the originating licensee to:

- a.* Establish an expected time of delivery; and
- b.* Confirm receipt of transferred radioactive material. If the material is not received at the expected time of delivery, notify the originating licensee and assist in any investigation.

40.54(8) In order to ensure the safe handling, use, and control of licensed material in use and in storage, each licensee that possesses mobile or portable devices containing radioactive material in quantities greater than or equal to Appendix G values shall:

- a.* For portable devices, 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.
- b.* For mobile devices:

(1) That are only moved outside of the facility (e.g., on a trailer), 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.

(2) That are only moved inside a facility, have a physical control that forms a tangible barrier to secure the material from unauthorized movement or removal when the device is not under direct control and constant surveillance by the licensee.

c. For devices in or on a vehicle or trailer, have a method to disable the vehicle or trailer when not under direct control and constant surveillance by the licensee.

40.54(9) The licensee shall retain documentation required by the increased controls for three years after the increased controls are no longer effective.

a. The licensee shall retain documentation regarding the trustworthiness and reliability of individual employees for three years after an individual's employment ends.

b. Each time the licensee revises the list of approved persons required by 40.54(2) "d," or the documented program required by 40.54(3), the licensee shall retain the previous documentation for three years after the revision.

c. The licensee shall retain documentation on each radioactive material carrier for three years after the licensee discontinues use of that particular carrier.

d. The licensee shall retain documentation on shipment coordination, notifications, and investigations for three years after the shipment or investigation is completed.

e. After the license is terminated or amended to reduce possession limits below the quantities of concern, the licensee shall retain all documentation required by these increased controls for three years.

40.54(10) Detailed information generated by the licensee that describes the physical protection of radioactive material quantities of concern is sensitive information and shall be protected from unauthorized disclosure.

a. The licensee shall control access to its physical protection information to those persons who have an established need to know the information and are considered to be trustworthy and reliable.

b. The licensee shall develop, maintain, and implement policies and procedures for controlling access to, and for proper handling and protection against unauthorized disclosure of, its physical protection information for radioactive material covered by these requirements. The policies and procedures shall include the following:

(1) General performance requirement that each person who produces, receives, or acquires the licensee's sensitive information protect the information from unauthorized disclosure;

(2) Protection of sensitive information during use, storage, and transit;

(3) Preparation, identification or marking, and transmission;

(4) Access controls;

(5) Destruction of documents;

(6) Use of automatic data processing systems; and

(7) Removal from the licensee's sensitive information category.