



COLORADO
Department of Public
Health & Environment

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To: Members of the State Board of Health

From: James Jarvis, Health Physicist, Hazardous Materials and Waste Management Division

Through: Gary Baughman, Division Director *GB*

Date: April 30, 2015

Subject: **Rulemaking Hearing**
Proposed new rule 6 CCR 1007-1, Part 22, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material", for the rulemaking hearing to occur in May, 2015

The Division is proposing a new regulatory part, titled *Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material*.

The proposed regulatory part is being initiated to maintain compatibility with the requirements of the U.S. Nuclear Regulatory Commission (NRC) and implement the requirements in 10 CFR Part 37. The proposed new rule addresses security requirements for certain radioactive materials licensees possessing Category 1 or Category 2 radioactive materials to protect the public against theft, diversion or unauthorized use. Category 1 and 2 radioactive materials are those materials which have been determined by national and international agencies to present a potential risk to national security and public health and safety due to the types and amounts of radioactivity involved. The Category 1 and 2 materials are defined in the proposed rule and are based upon those found in the International Atomic Energy Agency (IAEA) Code of Conduct. The proposed rule codifies and expands upon the current security requirements required by license condition which have been in place since about 2005.

The proposed Part 22 rule addresses the following major subject areas:

- (1) Physical security requirements;
- (2) Training requirements for the security program;
- (3) Personnel background check requirements for individuals requiring unescorted access;
- (4) Records and notification requirements; and
- (5) Security during transportation.

Approximately 115 stakeholders (including the ~30 directly impacted licensee stakeholders) were notified of the proposed new rule and were provided the opportunity to ask questions and comment via email, and were offered the opportunity to participate in stakeholder meetings. The Division received no written comments from stakeholders. A limited number of stakeholders participated in the stakeholder meetings. The NRC completed its review of the proposed rule following the request for rulemaking and provided two minor comments. The NRC requested changes have been incorporated into the draft rule.

Further details are listed in a Statement of Basis and Purpose and Specific Statutory Authority for the proposed rule, which, along with a Regulatory Analysis and supporting information, is available at: <http://www.colorado.gov/pacific/cdphe/radregs>

The Radiation Program requests the Board of Health approve the rule during the rulemaking hearing on May 15, 2015.

cc: Deborah Nelson, Administrator, State Board of Health

DRAFT
STATEMENT OF BASIS AND PURPOSE
AND SPECIFIC STATUTORY AUTHORITY
for Amendments to
**6 CCR 1007-1, Radiation Control, Part 22, Physical Protection
of Category 1 and Category 2 Quantities of Radioactive Material**

Basis and Purpose.

The Colorado Radiation Control Act, Title 25, Article 11, Colorado Revised Statutes (the Act), requires the State Board of Health to formulate, adopt and promulgate rules and regulations pertaining to radiation control.

Section 25-11-103 of the Act requires the Colorado Department of Public Health and Environment (Department) to develop and conduct programs for evaluation and control of hazards associated with the use of sources of ionizing radiation. Under this authority the Department requires registration of sources of ionizing radiation such as radiation machines and licenses governing the use of radioactive materials.

Section 25-11-104 of the Act requires Colorado's radiation regulations to be consistent with the Suggested State Regulations for Control of Radiation (SSRCR) of the Conference of Radiation Control Program Directors, Inc., except when the Board of Health concludes, on the basis of detailed findings, that a substantial deviation from the SSRCR is warranted. The Department's regulations, where applicable, must also be compatible with the regulations adopted by the U.S. Nuclear Regulatory Commission (NRC) in order to maintain status as an Agreement State. The Act establishes the SSRCR as the model for Colorado to use in adopting NRC regulatory provisions. In some instances, maintaining consistency with the SSRCR may not be possible due to the model regulation being out of date with NRC changes, where no model regulation exists, or where there are specific programmatic needs that differ greatly from the SSRCR.

Colorado's proposed new rule - Part 22 - is based upon SSRCR Part "V" (October 2014) which is in turn based upon the federal requirements contained in 10 CFR Part 37. The 10 CFR Part 37 rule was promulgated in May 2013 and became effective in March 2014 for licensees in states that are under federal jurisdiction.

The Department is proposing a new regulatory Part 22, *Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material*, with the State of Colorado Rules and Regulations Pertaining to Radiation Control. The proposed rule addresses security requirements for certain radioactive materials to protect the public against theft, diversion or unauthorized use. Category 1 and 2 radioactive materials are those materials which have been determined by national and international agencies to present a potential risk to national security and public health and safety due to the types and amounts of radioactivity involved. The rule will expand upon (and eventually replace) the security related requirements now contained in license condition.

The Part 22 rule addresses the following major areas:

- (1) Physical security requirements;
- (2) Training requirements for the security program;
- (3) Personnel background check requirements for individuals requiring unescorted access;
- (4) Records and notification requirements; and
- (5) Security during transportation.

Note that editorial comments, notes, and information shown in the right side margin of the draft proposed rule are for information only to aid the reader, and are not considered part of the regulation. These will be removed from the final regulation prior to submission to the Colorado Secretary of State's office for publishing in the Colorado register.

Specific Statutory Authority.

These rules are promulgated pursuant to the following statutory provisions: 25-1.5-101(1)(k), 25-1.5(1)(l), 25-11-103, 25-11-104, and 25-1-108, C.R.S.

SUPPLEMENTAL QUESTIONS

Is this rulemaking due to a change in state statute?

Yes, the bill number is _____; rules are ___ authorized ___ required.
 No

Is this rulemaking due to a federal statutory or regulatory change?

Yes**
 No

** The promulgation of 10 CFR Part 37 in May 2013 requires Agreement States such as Colorado to promulgate equivalent regulations in a timely manner.

Does this rule incorporate materials by reference?

Yes
 No

Does this rule create or modify fines or fees?

Yes
 No

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REGULATORY ANALYSIS

for Amendments to

**6 CCR 1007-1, Radiation Control, Part 22, Physical Protection
of Category 1 and Category 2 Quantities of Radioactive Material**

1. **A description of the classes of persons who will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule.**

The proposed rule impacts licensees who possess Category 1 and Category 2 radioactive materials.^a These radioactive materials have been determined by the federal government to present a potential security risk, and therefore require further control and security measures for storage, use, and transit. The proposed rule implements the additional security requirements of federal rule found in 10 CFR Part 37 which was promulgated in May 2013 for licensees of the NRC.

The less than 30 radioactive materials licensees who currently possess Category 1 or Category 2 quantities of radioactive material will be impacted by the proposed new regulation. These same impacted licensees are now required to implement additional security requirements similar to those found in the proposed rule for these materials. These additional requirements have been in place since about 2005 (and later expanded on in 2008) and are presently mandated through license condition requirements. The requirements of the proposed Part 22 rule include and expand upon the requirements now specified in license condition. The typical types of licensees impacted by the proposed rule include: medical facilities with gamma knife devices; industrial radiography licensees, self-shielded (blood irradiators) licensees, research irradiator licensees, and well logger licensees.

There are no specific classes of persons that are expected to benefit from the proposed rule. By ensuring that certain risk-significant radioactive materials are stored, used and shipped appropriately in accordance with the enhanced security measures, the citizens of Colorado as a whole will potentially realize a greater level of security from diversion and malevolent use of such materials.

Registrants or users of radiation producing (x-ray) machines are not impacted by the proposed new rule nor are most users of radioactive materials. This rule only impacts specific radioactive materials licensees having radioactive materials deemed to be of higher risk. Less than 10% of radioactive materials licensees are impacted by the proposed rule.

^aThe list of Category 1 and Category 2 quantities of radioactive material may be found in Appendix A of the proposed draft rule or in Appendix A to 10 CFR Part 37 (<http://www.nrc.gov/reading-rm/doc-collections/cfr/part037/part037-appa.html>)

2. **To the extent practicable, a description of the probable quantitative and qualitative impact of the proposed rule, economic or otherwise, upon affected classes of persons.**

QUANTITATIVE IMPACTS

All licensees who now possess Category 1 and Category 2 quantities of radioactive material are currently required to implement specific security measures that are above and beyond the basic security measures required for all radioactive materials

licensees. These requirements are implemented through license conditions and have been in place since 2005 as required by NRC. The proposed rule maintains and expands upon the existing security requirements contained in the specific radioactive materials licenses. It is estimated that the proposed rule duplicates roughly 80 % of the requirements currently implemented through license condition, by continuing to require full background checks and fingerprinting for individuals requiring unescorted access to Category 1 and 2 radioactive materials, requiring licensees to monitor and immediately detect, assess, and respond to unauthorized access to radioactive materials, and the continued coordination with local law enforcement.

The majority of physical security measures required by the proposed rule have been in place for about nine years since similar requirements were implemented through license condition beginning in 2005. Since the proposed rule is more specific with respect to physical security requirements, it is possible that a few licensees may be required to implement some additional physical security measures as a result of the proposed rule. Through the Global Threat Reduction Initiative (GTRI), a federal program of the National Nuclear Security Administration (NNSA), multiple Colorado licensees have already received physical security improvements and upgrades at their facilities at no upfront expense to the licensee. Those facilities, and in particular the facilities that possess Category 1 quantities of material have benefited from this federal program which is expected to eliminate the need for further security upgrades as a result of the proposed rule. Licensees in need of additional security measures may be able to take advantage of this federal program.

A substantial portion of the quantitative costs due to the proposed rule are associated with procedure and training development, periodic program review costs, and training. However, most facilities impacted by the rule and the current license condition requirements would likely already have some documented procedures and plans and likely already conduct some type of security training for their impacted employees and thus the impact may be less than estimated.

Some of the key requirements that will be new to licensees include the development of written security plans and implementation procedures for physical and information security; the development and implementation of annual security training for employees; and the annual testing of security systems. The quantitative impact of the proposed rule will be that licensees who possess Category 1 and 2 materials will be required to implement additional security related requirements. Some additional expense will be realized by licensees both initially and annually to maintain the security requirements. The additional expense will primarily be in terms of the licensee staff time and effort necessary to develop the written documents (plans and procedures) necessary to implement and maintain the new requirements. Estimates of licensee expenses are outlined in Table 1 and Table 2 below.

Table 1 outlines the initial one-time cost estimates associated with implementing the new rule for small, medium, and large facilities. (For cost estimation purposes, a small, medium, and large facility is assumed to have 5, 20, and 50 employees requiring background checks, respectively. Most impacted licensees are between a small and medium sized facility). Table 2 outlines the annual, ongoing costs associated with the rule. It is expected that most licensee costs will be lower than those estimated although it is possible that a few licensees may experience higher costs depending upon the specifics of their existing security program under the current requirements.

TABLE 1. ESTIMATED ONE TIME (INITIAL) COSTS TO LICENSEES AS A RESULT OF NEW OR REVISED REQUIREMENTS IN THE PROPOSED RULE.^a

ACTIVITY/REQUIREMENT	EST. LICENSEE HOURS	EST. COST PER LICENSEE
PLANS AND PROCEDURE DEVELOPMENT		
DEVELOPMENT/MODIFICATION OF ACCESS AUTHORIZATION PROGRAM PROCEDURES	40	\$2,200
DEVELOPMENT OF SECURITY PLAN AND IMPLEMENTING PROCEDURES ^b	60	\$3,300
DEVELOPMENT OF INFORMATION PROTECTION PROCEDURES	35	\$1,925
DEVELOPMENT OF PROCEDURE FOR CATEGORY 1 SHIPMENTS	N/A	\$0 ^c
BACKGROUND INVESTIGATIONS		
ADDITIONAL BACKGROUND INVESTIGATION REQUIRED FOR REVIEWING OFFICIAL PERSONNEL REQUIRING UNESCORTED ACCESS.	N/A	\$0 ^d
ADDITIONAL BACKGROUND INVESTIGATIONS REQUIRED FOR USER PERSONNEL REQUIRING UNESCORTED ACCESS.	N/A	\$0 ^e
COST OF DOCUMENTING THE LIST OF INDIVIDUALS GRANTED UNAUTHORIZED ACCESS	N/A	\$0 ^f
TRAINING		
INITIAL SECURITY TRAINING COSTS (EMPLOYEE TIME SPENT IN TRAINING CLASS)	2	\$110 per employee
DOCUMENTATION OF TRAINING (FLAT AMOUNT)	3	\$165
TOTAL ESTIMATED COST OF INITIAL TRAINING	-	\$715 (S) \$2,365 (M) \$5,665 (L)
LICENSEE COMMUNICATION TO LOCAL LAW ENFORCEMENT AGENCY (LLEA)		
LLEA PLAN DEVELOPMENT, NOTICE, AND DOCUMENTING COMMUNICATION EFFORTS ^g	31	\$1,705
TOTAL INITIAL IMPLEMENTATION COST ESTIMATES FOR PROPOSED PART 22	-	(S) \$9,845 (M) \$11,495 (L) \$14,795

^a The impacted activities and estimates in this table were modified from data contained in the Regulatory Analysis for 10 CFR Part 37. Some adjustments have been made based upon specific information obtained through discussions with affected licensees and professional judgment. An average hourly rate of \$55 per hour is assumed for licensee labor costs, based on the NRC Regulatory Analysis (derived from the National Wage Data from the Bureau of Labor Statistics).

^b Under the current requirements mandated by license condition, impacted licensees are required to have a documented security plan. Therefore, it is expected that some security documentation now exists that licensees may use and expand upon to meet the requirements of Part 22. The estimate assumes that the plan and procedures will take approximately 30 hours each.

^c Shipment of Category 1 materials is an infrequent event. Licensees who ship Category 1 materials must prepare written procedures for such shipments would potentially increase costs by \$1,100 per Category 1 licensee. Since this is an infrequent event unlikely to occur in the first year, it is excluded from the totals.

^d Current license condition requirements mandate that the reviewing official (RO) have a full background check with fingerprinting if they have unescorted access to Category 1 and 2 materials. To ensure the RO's are screened to the same level as user individuals, the proposed rule requires that all RO's be

granted access to the materials following completion of fingerprinting and background checks. Based upon licensee information, most licensees have 1-2 RO's who have completed the full background check including fingerprinting and therefore further background checks would not be required for most licensees. Should an additional/expanded background check be needed for an RO, the cost is estimated at \$491 per investigation per RO (8 hours to perform the background check at an assumed \$55 per hour, plus the fingerprinting and FBI check costs which total \$51).

^e The implementation of Part 22 is not expected to change (increase or decrease) the need for individual users to complete the security background check process. The number of users/individuals granted unescorted access is dependent upon the licensees business and operational needs for security cleared individuals requiring unescorted access.

^f This is a requirement of the current license conditions. The proposed Part 22 rule will not change what is currently required of licensees and therefore no additional costs are assumed.

^g Coordination with LLEA is a requirement of the current license conditions. The proposed Part 22 rule enhances and provides some additional specificity over what is currently required of licensees and therefore some additional costs are assumed.

TABLE 2. ESTIMATED ANNUAL COSTS TO LICENSEES AS A RESULT OF NEW OR MODIFIED REQUIREMENTS IN THE PROPOSED RULE.^a

ACTIVITY/REQUIREMENT	EST. HOURS	EST. COST PER LICENSEE
ANNUAL REVIEW OF PLANS AND PROCEDURES		
ANNUAL SECURITY PROGRAM REVIEW	25	\$1,375
ANNUAL ACCESS AUTHORIZATION PROGRAM REVIEW	25	\$1,375
TRAINING		
ANNUAL SECURITY REFRESHER TRAINING (PER EMPLOYEE)	2 per employee	\$110 per employee
DOCUMENTATION FOR ANNUAL TRAINING	2	\$110 (TOTAL PER YEAR PER LICENSEE)
ANNUAL COSTS PER LICENSEE FOR TRAINING (REFRESHER TRAINING + DOCUMENTATION)	-	\$660 (S) \$2,310 (M) \$5,610 (L)
ANNUAL LLEA COORDINATION		
ANNUAL COORDINATION EFFORTS WITH LLEA + DOCUMENTING COORDINATION EFFORTS	5.5	\$303
ANNUAL MAINTENANCE AND TESTING OF SECURITY SYSTEMS		
MAINTENANCE AND TESTING OF SECURITY SYSTEM/EQUIPMENT	20	\$1,100
DOCUMENTATION OF TESTING/RECORDS MAINTENANCE	10	\$550
ACCESS AUTHORIZATION PROGRAM		
NEW/ADDITIONAL BACKGROUND INVESTIGATIONS REQUIRED ^b	N/A	\$0 ^b
10 YEAR REINVESTIGATIONS		
TIME TO COMPLETE REINVESTIGATION	1	\$55
FINGERPRINTING AND FBI CHECK FEE	-	\$51
TOTAL COST PER REINVESTIGATION PER EMPLOYEE	-	\$106

TOTAL ANNUAL COST PER LICENSEE FOR REINVESTIGATION (ASSUMES 20% OF EMPLOYEES REQUIRE REINVESTIGATION IN ANY GIVEN YEAR)		\$106 (S) \$ 424 (M) \$1,060 (L)
ANNUAL COST OF MAINTENANCE OF EMPLOYEE ACCESS LIST	2	\$110
EVENT NOTIFICATIONS		
NOTIFICATIONS OF ATTEMPTED THEFT, SABOTAGE, DIVERSION ^c	N/A	\$0 ^c
REPORTING OF SUSPICIOUS EVENTS ^d	0.25	\$14
CATEGORY 1 SHIPMENTS		
PREPARATION ACTIVITIES FOR CATEGORY 1 SHIPMENTS (LICENSE VERIFICATION; COORDINATION; NOTIFICATIONS; DOCUMENTATION)	-	\$436
PHYSICAL PROTECTION OF CAT 1 SHIPMENTS ^e	-	-
CATEGORY 2 SHIPMENTS		
PREPARATION ACTIVITIES FOR CATEGORY 2 SHIPMENTS (LICENSE VERIFICATION; COORDINATION; NOTIFICATION; DOCUMENTATION)	-	\$3,060 ^f (PER YEAR)
PHYSICAL PROTECTION OF CAT 2 SHIPMENTS	-	\$1,000
TOTAL ESTIMATED ANNUAL COSTS	-	(S) \$10,088 (M) \$12,056 (L) \$15,992

^a The impacted activities and estimates in this table were modified from data contained in the Regulatory Analysis for 10 CFR Part 37. Some adjustments have been made based upon specific information obtained through discussions with affected licensees and professional judgment. An average hourly rate of \$55 per hour is assumed for licensee labor costs, based on the NRC Regulatory Analysis (derived from the National Wage Data from the Bureau of Labor Statistics).

^b Since the current license condition requirements require background checks including fingerprinting, it is expected that the new rule will not require additional personnel to have a background check completed. The number of users requiring unescorted access to Category 1 and Category 2 is determined by the licensee based upon business needs and is not dependent upon the requirements of the proposed rule.

^c Notifications of theft, sabotage, and diversion are required by the current license condition requirements and therefore no additional costs are assumed.

^d Reporting of suspicious events is a new requirement. The Department does not have any history or data pertaining to notifications relating to suspicious activities. Estimate assumes 1 incident per year per licensee. Estimate is based on NRC data.

^e The shipment of Category 1 materials are relatively infrequent and typically occur every 5-10 years, depending upon the isotope involved and the needs and use of the source/device. Despite the additional security requirements in the proposed rule, the shipment of Category 1 materials in and of themselves, result in significant coordination, expense, and health and safety considerations and expense on the part of the licensee. As estimated by NRC, an additional expense of up to \$10,000 per Category 1 shipment may be realized as a result of the additional security requirements relating to shipments. Since shipments of such material are relatively infrequent and do not occur every year, they are not included in the final total annual cost estimates.

^f This estimate assumes a licensee has 15 devices which are shipped 3 times per year resulting in approximately 45 shipments per year at an estimated cost of ~\$68 per shipment. Shipments of Category 2 materials by certain licensees are a routine, frequent event.

The estimated cost to licensees to implement the new rule is dependent upon a number of factors. The factors impacting cost include the number of reviewing officials who do not already have but require a full criminal background check and fingerprinting; the number of individuals who require initial and refresher training; the

number of individuals who require unescorted access and therefore require background checks; the complexity of the security program and facility; the level of detail in the security plan and procedures; and the frequency and type of shipments of radioactive materials. Most of these factors are not easily predictable and largely depend upon the size and type of facility/operation, and the business needs of the licensee.

QUALITATIVE IMPACTS

The qualitative impact or value of the proposed rule is the associated decreased risk of a security related event, such as theft or diversion of radioactive material and subsequent use for unauthorized purposes. Increasing the security for high-risk radioactive material decreases the risk of malevolent use and would expectedly benefit Colorado and the nation. Other positive impacts resulting from the decreased risk and avoidance of security-related events include reducing or eliminating public and occupational health issues due to a radioactive materials accident or event. Similarly, one would expect a benefit due to the avoidance of potential damage to licensee and community property as a result of improper use of risk significant radioactive materials. In addition, some regulatory efficiency is gained by implementing the requirements through regulation rather than through license conditions and supplemental documents issued to each impacted licensee. Similarly, regulatory efficiencies are also realized for prospective (future) licensees in that requirements are centralized in the regulations rather than having the Program provide them at the time of application.

An additional qualitative impact of the proposed rule will be that Colorado's regulatory framework for risk-significant quantities of radioactive material will be consistent with those of the federal government (NRC) and other Agreement States, and consistent with the policies of the Department of Homeland Security.

3. The probable costs to the agency and to any other agency for the implementation and enforcement of the proposed rule and any anticipated effect on state revenues.

It is expected that some additional effort by the Department's Radioactive Materials Unit will be necessary to implement and maintain the requirements of proposed new rule.

The transition from current security requirements (contained within the affected licenses as license conditions) to regulations will require modification of approximately 30 licenses. This additional cost will be a one-time effort and realized at the time the license is amended to remove the current requirements (and defer to regulation). It is expected that this will occur in early 2016, just prior to the compliance (enforcement) date in March 2016. Similarly, there will be some initial expense due to updating inspection checklists and providing staff training. Some additional annual costs will also be realized as a result of additional documentation reviews during the 5 year license renewal cycles as well as during routine inspections. Cost estimates are outlined for initial and annual activities in Table 3 below.

TABLE 3. ESTIMATED INITIAL AND ANNUAL COSTS TO AGENCY (RADIATION PROGRAM) AS A RESULT OF NEW OR MODIFIED REQUIREMENTS IN THE PROPOSED RULE.

ACTIVITY	ESTIMATED HOURS	ESTIMATED COST FOR AGENCY ^a
-INITIAL COSTS-		
INITIAL LICENSE AMENDMENTS TO TRANSITION FROM LICENSE CONDITION TO REGULATION	60	\$3,000
INITIAL UPDATE TO INSPECTION CHECKLISTS	3	\$150
INITIAL STAFF TRAINING	4 ^b	\$2,000
INITIAL INSPECTION COSTS DUE TO ADDITIONAL REQUIREMENTS	N/A	\$0 ^c
	TOTAL	\$5,150
-ANNUAL COSTS-		
ANNUALIZED COSTS OF (5 YEAR) LICENSE RENEWALS AND PERIODIC SECURITY RELATED AMENDMENTS	30	\$1,500
ANNUAL INSPECTION COSTS DUE TO ADDITIONAL REGULATORY REQUIREMENTS	1 (PER LICENSEE)	\$750 ^d
	TOTAL	\$2,250

^a The hourly staff rate is assumed to be \$50 per hour.

^b Assumes 10 staff members will require training.

^c No additional initial/special inspections will be performed as a result of the new regulatory requirements/Part 22. Inspections will be conducted in accordance with the current routine health and safety inspection schedule.

^d Assumes 15 inspections are conducted per year on average. Category 2 licensees are typically required to be inspected annually.

The total costs to the Department for implementation of the new rule is therefore estimated to be approximately \$5,150 initially, and approximately \$2,250 annually.

Similar to the current license condition requirements and the requirements of 10 CFR Part 37, new Part 22 requirements will require licensees to coordinate with local law enforcement agencies (LLEAs). The law enforcement agency will typically be the local police or sheriff department in the location where the licensee has facilities. The burden of the requirements fall upon the impacted licensees and not local law enforcement as the radiation program has no regulatory authority over LLEA. No other agency will be impacted by the proposed new rule.

4. A comparison of the probable costs and benefits of the proposed rule to the probable costs and benefits of inaction.

The costs of the proposed rule for the affected licensees are associated with the development or revisions of written plans, procedures and training documents or materials, training of staff, and the required annual security program review and testing required by the new regulatory part. It is expected that nearly all of the impacted licensees have physical security systems in place that will meet the physical security requirements more explicitly required by the new rule. However, since the new rule is more prescriptive with respect to certain physical security requirements, it is possible that a limited number of licensees possessing Category 1 materials could be required to implement some additional security upgrades. Without further information from the licensees and a specific case-by-case evaluation and inspection,

the number of these licensees impacted and costs are difficult to predict but would be expected to be very limited. (As indicated in item 2 above, some licensees may be eligible for no-cost security upgrades provided by National Nuclear Security Administration programs.)

A qualitative benefit of the proposed rule will be that Colorado's program pertaining to security of certain risk-significant radioactive materials will be consistent with those of federal rule (NRC) and other Agreement States who have implemented equivalent requirements. By implementing the new rule, Colorado will continue to maintain its status as an Agreement State under the NRC. Although less easily quantified, the enhanced protection requirements associated with Category 1 and Category 2 materials specified in the proposed rule is expected to help reduce the risk that public health and safety and occupational health will be affected by unintended radiological releases. Similarly, the risk of property contamination (on-site and off-site of the licensee facility) from such releases would also be reduced. More frequent notification of Local Law Enforcement required of licensees as a result of the proposed rule may produce a more informed LLEA.

Inaction or failure to promulgate, require or otherwise implement the additional security requirements contained in the proposed rule would ultimately place Colorado in violation of the agreement¹ between Colorado and the U.S. Nuclear Regulatory Commission and could prohibit maintaining status as an Agreement State. Failure to implement the requirements will result in Colorado being incompatible with the federal rules of 10 CFR Part 37 and would ultimately result in inconsistency in national regulatory scheme pertaining to regulation of certain risk-significant radioactive materials. Inaction or continued failure to promulgate equivalent requirements could potentially result in deferral of the security requirements to federal rule and the enforcement of the requirements to NRC.

¹<http://nrc-stp.ornl.gov/special/regs/coagreements.pdf>

5. A determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule.

The Radiation Program believes there are no less costly or less intrusive methods for implementing these additional security requirements. As an Agreement State, Colorado's Radiation Program must promulgate requirements and regulations that are both compatible and consistent with federal rules governing radioactive materials to help ensure a nationwide, consistent regulatory program to ensure the security of such materials.

The current method of utilizing license conditions and supplemental documents is not a particularly efficient method of implementing requirements. The current process requires maintenance of approximately 30 licenses which contain addendums and reference documents specific for the security requirements. Implementing the requirements through regulation is more efficient and would make the requirements available for current and prospective licensees in a single location. The Radiation Program believes rule promulgation is the preferred method for implementing these specific requirements.

6. Alternative Rules or Alternatives to Rulemaking Considered and Why Rejected.

There are no alternative rules or rulemaking considered. As an Agreement State, Colorado's Radiation Program must promulgate requirements and regulations that are

both compatible and consistent with federal rules governing radioactive materials to help ensure a nationwide, consistent regulatory program to ensure the security of such materials.

7. To the extent practicable, a quantification of the data used in the analysis; the analysis must take into account both short-term and long-term consequences.

The data used in the analysis is based on certain data and information provided in the regulatory analysis for 10 CFR Part 37, on which the proposed Part 22 rule is ultimately based. Licensee hourly rates are based on nationally derived statistics from the U.S. Bureau of Labor. State agency hourly rates are based on internal data averages for state staff based upon Division fiscal data. Some modifications and assumptions to the federal regulatory analysis information have been made to make the data more specific to Colorado licensee demographics or are based on staff judgment.

The consequences identified below are in addition to the health and safety risk the federal regulation seeks to address.

SHORT-TERM CONSEQUENCES

The short-term consequences of failing to implement the proposed regulatory changes would result in the Radiation Program being non-compliant by the NRC mandated due date of March 19, 2016. Although many of the requirements could remain in place through license condition, Colorado would not benefit from further reduction in risk provided by the additional requirements in the proposed rule.

LONG-TERM CONSEQUENCES

The long-term consequences of failing to implement the proposed regulatory changes for the radioactive materials program would potentially result in an inadequate to protect health and safety determination by NRC during its periodic evaluation of Colorado's Agreement State program. If not corrected through implementation of equivalent requirements, such a determination could eventually result in Colorado's regulatory program being under heightened oversight and ultimately federal government (US NRC) control. Elimination of the radioactive materials program would then be contrary to the requirements of current state statute.

DRAFT
STAKEHOLDER COMMENTS
for Amendments to
**6 CCR 1007-1, Radiation Control, Part 22, Physical Protection
of Category 1 and Category 2 Quantities of Radioactive Material**

The following individuals and/or entities were included in the development of these proposed rules:

The ~30 impacted licensees were notified on December 31, 2014 of a pre-comment period stakeholder meeting (held on January 15). Additionally, a notification of the opportunity to comment on the proposed changes to Part 22 was sent on January 21, 2015 to a total of approximately 115 entities via email.

The entities notified on January 22 represented:

- Approximately 30 specific radioactive materials licensees currently implementing additional security requirements through license condition that would be impacted by the proposed Part 22 rule;
- Approximately 85 “other stakeholders” representing individuals who have specifically signed up to receive notification of proposed radiation regulation changes and who represent a wide variety of interests, most of whom are not impacted by the new rule. These stakeholder entities may include: x-ray registrants, non-impacted radioactive materials licensees; private citizens; private companies; professional organizations; and special interest groups.

In addition to the opportunity for written comment, stakeholders were provided with the opportunity to participate in two stakeholder meetings held on January 15 and February 4. A total of 7 stakeholders participated in these meetings either in-person or via phone. Stakeholders participating asked specific questions regarding various aspects of implementation, but did not specifically provide comments or recommended changes.

This rulemaking does not include a local government mandate. The burden of regulatory conformity to this rule applies to the regulated entities (licensees) only. Executive Order #5 (“EO5”) does not apply.

Summarize Major Factual and Policy Issues Encountered and the Stakeholder Feedback Received. If there is a lack of consensus regarding the proposed rule, please also identify the Department’s efforts to address stakeholder feedback or why the Department was unable to accommodate the request.

To date, no stakeholders have provided written comments opposing or supporting the rule, nor have changes to the rule been suggested. Most comments and questions that arose during the stakeholder meetings and discussions were technical in nature and related to implementation of the proposed rule requirements for specific situations or conditions. Radiation program licensing and inspection staff present at the meetings responded to questions as they arose. For further information, stakeholders were referred to the Department’s website where rulemaking information and links to NRC guidance documents (for implementing the equivalent federal rule 10 CFR Part 37) are posted.

No specific policy issues have been identified with development of the proposed rule. The rule, which is based upon federal rules promulgated in 2013, codifies and expands upon the security requirements currently required by license condition most of which have been in place since 2005. The rule puts forth certain requirements for the expanded security of specific types and quantities of radioactive material to address physical security, written

plans and procedures, training, communication with local law enforcement entities, and periodic security program evaluations. As with many things security related, law enforcement is one element of a larger comprehensive security program. The rule however does not dictate or require explicit actions of law enforcement. The burden of implementation of rule requirements has been and continues to reside with the radioactive materials licensee. Although not required, local law enforcement entities have voluntarily worked with numerous licensees over the years since the inception of the requirements to maintain a level of awareness of licensee activities and facilities. A high degree of compatibility with the equivalent federal rule is mandated and therefore Agreement States such as Colorado have little discretion or flexibility with respect to modifying the language or requirements of the rule. There is no state mandate on local law enforcement and thus, there is no EO5 impact.

Please identify health equity and environmental justice (HEEJ) impacts. Does this proposal impact Coloradoans equally or equitably? Does this proposal provide an opportunity to advance HEEJ? Are there other factors that influenced these rules?

The Department has proposed a rule that treats entities that possess certain risk-significant quantities of radioactive materials (and who need additional security measures as a result of these materials) equitably. The proposed requirements are based upon the type and quantity of radioactive material in possession of the licensee and therefore all licensees having such higher risk materials are impacted equally. Implementation of the rule is expected to result in a qualitative reduction in the risk to public, occupational, and environmental health due to avoidance and prevention of malevolent use of radioactive materials. Additionally, the rule is necessary to maintain nationwide consistency in the way in which higher risk materials are managed.

2 DRAFT 2 05/04/15

3 DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

4 Hazardous Materials and Waste Management Division

5 RADIATION CONTROL – PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2
6 QUANTITIES OF RADIOACTIVE MATERIAL

7 6 CCR 1007-1 PART 22

8 Adopted by the Board of Health May 15, 2015

9 Affected licensees shall be compliant with this Part on or before March 19, 2016

10 [Editor's Notes follow the text of the rules at the end of this CCR Document.]

11 _____

12 PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2 QUANTITIES OF
13 RADIOACTIVE MATERIAL

14 22.1 Authority

15 22.1.1 Rules and regulations set forth herein are adopted pursuant to the provisions of section 25-1-108,
16 25-1.5-101(1)(k) and (1)(l), and 25-11-104, CRS.

17 22.2 Scope, Purpose and Applicability

18 22.2.1 Scope and Purpose

19 22.2.1.1 This Part has been established to provide the requirements for the physical protection
20 program for any licensee that possesses an aggregated category 1 or category 2 quantity of
21 radioactive material listed in Appendix A to this Part. These requirements provide reasonable
22 assurance of the security of category 1 or category 2 quantities of radioactive material by
23 protecting these materials from theft or diversion. Specific requirements for access to material,
24 use of material, transfer of material, and transport of material are included. No provision of this
25 Part authorizes possession of licensed material.

26 22.2.2 Applicability

27 22.2.2.1 This Part applies to any person who, under the regulations of 22.8 through 22.23,
28 possesses or uses at any site, an aggregated category 1 or category 2 quantity of radioactive
29 material.

30 22.2.2.2 This Part applies to any person who, under the regulations of 22.24 through 22.29:

- 31 (1) Transports or delivers to a carrier for transport in a single shipment, a
32 category 1 or category 2 quantity of radioactive material; or
- 33 (2) Imports or exports a category 1 or category 2 quantity of radioactive
34 material; the provisions only apply to the domestic portion of the transport.

Comment [JJ1]: The draft date is for information only and is not part of the final rule or rule language.

Comment [JJ2]: This reflects the date of anticipated approval by the Colorado Board of Health. The effective date is typically 60 days beyond this date.

In order to provide licensees with a reasonable implementation time, the Radiation Program will not begin enforcement of the requirements until March 19, 2016.

Comment [JJ3]: The compliance date specified here is part of the rule. Licensees are expected to be compliant with the requirements of the rule on or before the specified date.

Comment [JJ4]:
EDITORIAL NOTE 1: ALL COMMENTS (SUCH AS THIS ONE) SHOWN IN THE RIGHT SIDE MARGIN OF THIS DOCUMENT ARE FOR INFORMATION PURPOSES ONLY TO PROVIDE ADDITIONAL INFORMATION AND TO AID THE READER IN UNDERSTANDING THE PROPOSED RULE DURING THE DRAFT REVIEW PROCESS. SINCE THIS IS A NEW RULE, MOST COMMENTS REFLECT CROSS-REFERENCE INFORMATION TO THE SUGGESTED STATE REGULATION AND NRC REGULATION.

THESE COMMENTS ARE **NOT** PART OF THE RULE AND ALL COMMENTS WILL BE DELETED PRIOR TO FINAL SUBMISSION.

EDITORIAL NOTE 2: THE ACRONYM "CRCPD" IN THE SIDE MARGIN NOTES REFERS TO THE CONFERENCE OF RADIATION CONTROL PROGRAM DIRECTORS (CRCPD), INC., WHICH DEVELOPS SUGGESTED STATE REGULATIONS FOR CONTROL OF RADIATION (SSRCR). UNLESS OTHERWISE DETERMINED BY THE BOARD OF HEALTH, COLORADO'S RULES ARE TO BE CONSISTENT WITH THE SSRCR REGULATIONS. THE SSRCRS MAY BE FOUND ONLINE AT:
<http://www.crcpd.org/ssrcrs/default.aspx>

COMPATIBILITY WITH FEDERAL U.S. NUCLEAR REGULATORY COMMISSION REQUIREMENTS IS ALSO REQUIRED TO MAINTAIN AGREEMENT STATE STATUS.

THIS PROPOSED RULE IS BASED ON THE CRCPD SSRCR PART V (PHYSICAL PROTECTION...), DATED OCTOBER 2014.

EDITORIAL NOTE 3: INFORMATION ON NRC COMPATIBILITY CATEGORIES MAY BE FOUND AT:
<http://nrc-stp.ornl.gov/procedures/sa200.pdf>

EDITORIAL NOTE 4: INFORMATION ON THE NRC REGULATORY ACTION TRACKING SYSTEM (RATS) MAY BE FOUND AT:
<http://nrc-stp.ornl.gov/regtoolbox.html>
THIS RULE IS BASED ON NRC RATS 2013-1...

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22.3 Definitions.

As used in this Part, these terms have the definitions set forth as follows:

"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 22.8 through 22.14 and who has completed the training required by 22.16.3.

"Background investigation" means the investigation conducted by a licensee or applicant 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 to this Part. This is determined by calculating the ratio of the total activity of each Radionuclide to the category 1 threshold for that radionuclide and adding the ratios together. If the sum is equal to or exceeds 1, the quantity would be considered a category 1 quantity. Category 1 quantities of radioactive material do not include the radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet.

"Category 2 quantity of radioactive material" means a quantity of radioactive material meeting or exceeding the category 2 threshold but less than the category 1 threshold in Table 1 of Appendix A to this Part. This is determined by calculating the ratio of the total activity of each radionuclide to the category 2 threshold for that radionuclide and adding the ratios together. If the sum is equal to or exceeds 1, the quantity would be considered a category 2 quantity. Category 2 quantities of radioactive material do not include the radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet.

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

"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.

"Fingerprint orders" means the orders issued by the U.S. Nuclear Regulatory Commission or the legally binding requirements issued by Agreement States that require fingerprints and criminal history records checks for individuals with unescorted access to category 1 and category 2 quantities of radioactive material or (as defined in 10 CFR Part 73) safeguards information-modified handling.

"Government agency" means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the

Comment [JJ5]:

Cross-references:
CRCPD SSR Part V.3
10 CFR Part 37: 37.5

Compatibility categories for this section vary from "A" to "H&S", depending upon the specific definition.

100 United States, or any board, bureau, division, service, office, officer, authority, administration, or other
101 establishment in the executive branch of the Government.
102

103 "License issuing authority" means the licensing agency that issued the license, i.e. the U.S. Nuclear
104 Regulatory Commission or the appropriate agency of an Agreement State.
105

106 "Local law enforcement agency (LLEA)" means a public or private organization that has been approved
107 by a federal, state, or local government to carry firearms and make arrests, and is authorized and has
108 the capability to provide an armed response in the jurisdiction where the licensed category 1 or category
109 2 quantity of radioactive material is used, stored, or transported.
110

111 "Lost or missing licensed material" means licensed material whose location is unknown. It includes
112 material that has been shipped but has not reached its destination and whose location cannot be readily
113 traced in the transportation system.
114

115 "Mobile device" means a piece of equipment containing licensed radioactive material that is either
116 mounted on wheels or casters, or otherwise equipped for moving without a need for disassembly or
117 dismounting; or designed to be hand carried. Mobile devices do not include stationary equipment
118 installed in a fixed location.
119

120 "Movement control center" means an operations center that is remote from transport activity and that
121 maintains position information on the movement of radioactive material, receives reports of attempted
122 attacks or thefts, provides a means for reporting these and other problems to appropriate agencies and
123 can request and coordinate appropriate aid.
124

125 "No-later-than arrival time" means the date and time that the shipping licensee and receiving licensee
126 have established as the time at which an investigation will be initiated if the shipment has not arrived
127 at the receiving facility. The no-later-than arrival time may not be more than 6 hours after the
128 estimated arrival time for shipments of category 2 quantities of radioactive material.
129

130 "Reviewing official" means the individual who shall make the trustworthiness and reliability
131 determination of an individual to determine whether the individual may have, or continue to have,
132 unescorted access to the category 1 or category 2 quantities of radioactive materials that are
133 possessed by the licensee.
134

135 "Sabotage" means deliberate damage, with malevolent intent, to a category 1 or category 2 quantity of
136 radioactive material, a device that contains a category 1 or category 2 quantity of radioactive material,
137 or the components of the security system.
138

139 "Safe haven" means a readily recognizable and readily accessible site at which security is present or from
140 which, in the event of an emergency, the transport crew can notify and wait for the local law enforcement
141 authorities.
142

143 "Security zone" means any temporary or permanent area determined and established by the licensee
144 for the physical protection of category 1 or category 2 quantities of radioactive material.
145

146 "Telemetric position monitoring system" means a data transfer system that captures information by
147 instrumentation and/or measuring devices about the location and status of a transport vehicle or
148 package between the departure and destination locations.
149

150 "Trustworthiness and reliability" are characteristics of an individual considered dependable in judgment,
151 character, and performance, such that unescorted access to category 1 or category 2 quantities of
152 radioactive material by that individual does not constitute an unreasonable risk to the public health and
153 safety or security. A determination of trustworthiness and reliability for this purpose is based upon the

154 results from a background investigation.

155

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

158

159 **22.4 Communications.**

160

161 Except where otherwise specified, all communications, reports, and notifications concerning or required by
162 the regulations in this Part shall be sent to Radiation Program - HMWMD, Colorado Department of Public
163 Health and Environment, 4300 Cherry Creek Drive South, Denver, CO 80246-1530.

164

165 **22.5 Reserved**

166

167 **22.6 Specific Exemptions.**

168

169 22.6.1 The Department may, upon application of any interested person or upon its own initiative, grant
170 such exemptions from the requirements of the regulations in this Part as it determines are authorized by
171 law and will not endanger life or property or the common defense and security, and are otherwise in the
172 public interest.

173

174 22.6.2 A licensee that possesses radioactive waste that contains category 1 or category 2 quantities of
175 radioactive material is exempt from the requirements of 22.8 through 22.29. Except that any radioactive
176 waste that contains discrete sources, ion-exchange resins, or activated material that weighs less than
177 2,000 kg (4,409 lbs) is not exempt from the requirements of this Part. The licensee shall implement the
178 following requirements to secure the radioactive waste:

179

180 A. Use continuous physical barriers that allow access to the radioactive waste only
181 through
182 established access control points;

183

184 B. Use a locked door or gate with monitored alarm at the access control point;

185

186 C. Assess and respond to each actual or attempted unauthorized access to determine
187 whether an actual or attempted theft, sabotage, or diversion occurred; and

188

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

192

193 **22.7 Reserved**

194

195 Background Investigations and Access Authorization Program

196

197 **22.8 Personnel Access Authorization Requirements for Category 1 or Category 2 Quantities of
198 Radioactive Material.**

199

200 22.8.1 General.

201

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

205

206 B. An applicant for a new license and each licensee that would become newly subject to the

Comment [JJ6]:
Cross-references:
CRCPD SSR Part V.6
10 CFR Part 37: 37.11(c)

Compatibility = B

Comment [JJ7]:
To eliminate a gap and to maintain consistency numbering throughout the rule this "reserved" provision is added. This is modified based on comments of the Colorado Attorney General's review of the proposed rule.

NOTE 1: The SSRCR Part V on which this rule is modeled also (inadvertently) excluded the parallel "V.7" section/numbering.

NOTE 2: The numbering of this rule is made to be consistent with the numbering of the SSRCR. For example, 22.8 is equivalent to SSRCR V.8 and so forth.

Comment [JJ8]:
Cross-references:
CRCPD SSR Part V.8
10 CFR Part 37: 37.21(a)

Compatibility = C

207 requirements of this Part upon application for modification of its license shall implement the
208 requirements of this Part, as appropriate, before taking possession of an aggregated category 1
209 or category 2 quantity of radioactive material.

211 C. Any licensee that has not previously implemented the **NRC** Security Orders or been subject
212 to the provisions of 22.8 through 22.14 shall implement the provisions of 22.8 through 22.14
213 before aggregating radioactive material to a quantity that equals or exceeds the category 2
214 threshold.

Comment [JJ9]:
Clarified with word "NRC", as Colorado did not issue security orders to implement the initial increased controls requirements.

216 22.8.2 **General** performance objective.

Comment [JJ10]:
Cross-references:
CRCPD SSR Part V.8
10 CFR Part 37: 37.21(b)

Compatibility = B

218 A. The licensee's access authorization program must ensure that the individuals specified in
219 22.8.3. are trustworthy and reliable.

221 22.8.3 **Applicability**.

Comment [JJ11]:
Cross-references:
CRCPD SSR Part V.8
10 CFR Part 37: 37.21(c)

Compatibility = B

223 A. Licensees shall subject the following individuals to an access authorization program in
224 accordance with Section 22.9:

- 226 1. Any individual whose assigned duties require unescorted access to category 1 or
- 227 category 2 quantities of radioactive material or to any device that contains the
- 228 radioactive material; and
- 229 2. Reviewing officials.

232 B. Licensees need not subject the categories of individuals listed in 22.12.1. to the
233 investigation elements of the access authorization program.

235 C. Licensees shall approve for unescorted access to category 1 or category 2 quantities of
236 radioactive material only those individuals with job duties that require unescorted access to
237 category 1 or category 2 quantities of radioactive material.

239 D. Licensees may include individuals needing access to safeguards information-modified
240 handling under 10 CFR Part 73 in the access authorization program under 22.8 through 22.14.

241 | **22.9 Access aAuthorization pProgram RRequirements.**

Comment [JJ12]:
Cross-references:
CRCPD SSR Part V.9
10 CFR Part 37: 37.23(a)

Compatibility = B

244 22.9.1 Granting unescorted access authorization.

246 A. Licensees shall implement the requirements of this Part for granting initial or reinstated
247 unescorted access authorization.

249 B. Individuals who have been determined to be trustworthy and reliable shall also
250 complete the security training required by 22.16.3 before being allowed unescorted
251 access to category 1 or category 2 quantities of radioactive material.

253 22.9.2 Reviewing officials.

Comment [JJ13]:
Cross-references:
CRCPD SSR Part V.9
10 CFR Part 37: 37.23(b)(1), (b)(2)

Compatibility = B

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

258

259 B. Each licensee shall name one or more individuals to be reviewing officials. After
 260 completing the background investigation on the reviewing official, the licensee shall provide
 261 under oath or affirmation, a certification that the reviewing official is deemed trustworthy and
 262 reliable by the licensee. The fingerprints of the named reviewing official must be taken by a
 263 law enforcement agency, Federal or State agencies that provide fingerprinting services to the
 264 public, or commercial fingerprinting services authorized by a State to take fingerprints. The
 265 licensee shall re-certify that the reviewing official is deemed trustworthy and reliable every 10
 266 years in accordance with 22.10.3.

267
 268 C. Reviewing officials must be permitted to have unescorted access to category 1 or category
 269 2 quantities of radioactive materials or access to safeguards information or safeguards
 270 information-modified handling, if the licensee possesses safeguards information or
 271 safeguards information modified handling.

272
 273 D. Reviewing officials cannot approve other individuals to act as reviewing officials.

274
 275 E. A reviewing official does not need to undergo a new background investigation before being
 276 named by the licensee as the reviewing official if:

- 277
 278 1. The individual has undergone a background investigation that included
 279 fingerprinting and an FBI criminal history records check and has been
 280 determined to be trustworthy and reliable by the licensee; or
- 281
 282 2. The individual is subject to a category listed in 22.12.1.

283
 284 22.9.3 Informed consent.

285
 286 A. Licensees may not initiate a background investigation without the informed and signed
 287 consent of the subject individual. This consent must include authorization to share personal
 288 information with other individuals or organizations as necessary to complete the background
 289 investigation. Before a final adverse determination, the licensee shall provide the individual
 290 with an opportunity to correct any inaccurate or incomplete information that is developed
 291 during the background investigation. Licensees do not need to obtain signed consent from
 292 those individuals that meet the requirements of 22.10.2. A signed consent must be obtained
 293 prior to any reinvestigation.

294
 295 B. The subject individual may withdraw his or her consent at any time. Licensees shall inform
 296 the individual that:

- 297
 298 1. If an individual withdraws his or her consent, the licensee may not initiate any
 299 elements of the background investigation that were not in progress at the time the
 300 individual withdrew his or her consent; and
- 301
 302 2. The withdrawal of consent for the background investigation is sufficient cause for
 303 denial or termination of unescorted access authorization.

304
 305 22.9.4 Personal history disclosure.

306
 307 A. Any individual who is applying for unescorted access authorization shall disclose the
 308 personal history information that is required by the licensee's access authorization program for
 309 the reviewing official to make a determination of the individual's trustworthiness and reliability.

Comment [JJ14]:
 During review and development of Part 22, and section 22.9.2(B) specifically, there is a cross-reference which should refer to the section on re-certification. However, the reference in an earlier draft of the rule cross-referenced a different section (22.10.2) which is believed to be an incorrect cross-reference. The draft rule reflects what is believed to be the correct cross-reference to 22.10.3.

In comparison to the equivalent section in 10 CFR Part 37 (37.23(b)(2)) the same apparent cross-reference error is present. The Department is requesting clarification from the NRC to determine whether there is an error in the current federal rule.

Comment [JJ15]:
 Cross-references:
 CRCPD SSR Part V.9
 10 CFR Part 37: 37.23(b)(3)
 Compatibility = C

Comment [JJ16]:
 Cross-references:
 CRCPD SSR Part V.9
 10 CFR Part 37: 37.23(b)(4)
 Compatibility = B

Comment [JJ17]:
 Cross-references:
 CRCPD SSR Part V.9
 10 CFR Part 37: 37.23(b)(5)
 Compatibility = B

Comment [JJ18]:
 Cross-references:
 CRCPD SSR Part V.9
 10 CFR Part 37: 37.23(c)
 Compatibility = B

Comment [JJ19]:
 Cross-references:
 CRCPD SSR Part V.9
 10 CFR Part 37: 37.23(d)
 Compatibility = B

310 Refusal to provide, or the falsification of, any personal history information required by this Part
311 is sufficient cause for denial or termination of unescorted access.

312
313 22.9.5 Determination **basis**.
314

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

318
319 B. The reviewing official may not permit any individual to have unescorted access until the
320 reviewing official has evaluated all of the information collected to meet the requirements of this
321 Part and determined that the individual is trustworthy and reliable. The reviewing official may
322 deny unescorted access to any individual based on information obtained at any time during the
323 background investigation.
324

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

327
328 D. The reviewing official may terminate or administratively withdraw an individual's unescorted
329 access authorization based on information obtained after the background investigation has
330 been completed and the individual granted unescorted access authorization.

331
332 E. Licensees shall maintain a list of persons currently approved for unescorted access
333 authorization. When a licensee determines that a person no longer requires unescorted access
334 or meets the access authorization requirement, the licensee shall remove the person from the
335 approved list as soon as possible, but no later than 7 working days, and take prompt measures
336 to ensure that the individual is unable to have unescorted access to the material.
337

338 22.9.6 **Procedures**.
339

340 A. Licensees shall develop, implement, and maintain written procedures for implementing the
341 access authorization program. The procedures must include provisions for the notification of
342 individuals who are denied unescorted access. The procedures must include provisions for the
343 review, at the request of the affected individual, of a denial or termination of unescorted access
344 authorization. The procedures must contain a provision to ensure that the individual is
345 informed of the grounds for the denial or termination of unescorted access authorization and
346 allow the individual an opportunity to provide additional relevant information.
347

348 22.9.7 Right to correct and complete **information**.
349

350 A. Prior to any final adverse determination, licensees shall provide each individual subject to
351 **22.8 through 22.14** this Part with the right to complete, **and correct, and explain information**
352 **and the right to explain information** obtained as a result of the licensee's background
353 investigation. Confirmation of receipt by the individual of this notification must be maintained
354 by the licensee for a period of 1 year from the date of the notification.
355

356 B. If, after reviewing his or her criminal history record, an individual believes that it is incorrect or
357 incomplete in any respect and wishes to change, correct, update, or explain anything in the
358 record, the individual may initiate challenge procedures. These procedures include direct
359 application by the individual challenging the record to the law enforcement agency that
360 contributed the questioned information or a direct challenge as to the accuracy or completeness
361 of any entry on the criminal history record to the Federal Bureau of Investigation, Criminal
362 Justice Information Services (CJIS) Division, ATTN: SCU, Mod. D-2, 1000 Custer Hollow Road,

Comment [JJ20]:
Cross-references:
CRCPD SSR Part V.9
10 CFR Part 37: 37.23(e)
Compatibility = B

Comment [JJ21]:
Cross-references:
CRCPD SSR Part V.9
10 CFR Part 37: 37.23(f)
Compatibility = C

Comment [JJ22]:
Cross-references:
CRCPD SSR Part V.9
10 CFR Part 37: 37.23(g)

In Draft 1 of the proposed rule, the language was modified slightly with the intent to clarify the understanding. The modified language varied from that contained in NRC rule. Following NRC review in April 2015, the NRC requires the language be made equivalent to that found in 37.23(g) as a matter of compatibility. NRC indicated the modified language as originally proposed (in Draft 1) changed the intent of the provision.

A reference to specific sections 22.8 through 22.14 is added. This addition is consistent with a reference to Subpart B of 10 CFR Part 37.

Compatibility = B

[The language of 22.9.7.A is modified slightly from SSR Part V, and Part 37.23(g) for clarity.]

363 Clarksburg, WV 26306 as set forth in 28 CFR 16.30 through 16.34. In the latter case, the
 364 Federal Bureau of Investigation (FBI) will forward the challenge to the agency that submitted the
 365 data, and will request that the agency verify or correct the challenged entry. Upon receipt of an
 366 official communication directly from the agency that contributed the original information, the FBI
 367 Identification Division makes any changes necessary in accordance with the information
 368 supplied by that agency. Licensees must provide at least 10 days for an individual to initiate
 369 action to challenge the results of an FBI criminal history records check after the record being
 370 made available for his or her review. The licensee may make a final adverse determination
 371 based upon the criminal history records only after receipt of the FBI's confirmation or correction
 372 of the record.

373 22.9.7 Records.

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

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

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

383 22.10 Background Investigations.

384 22.10.1 Initial investigation.

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

391 1. Fingerprinting and an FBI identification and criminal history records check in
 392 accordance with 22.11;

393 2. Verification of true identity. Licensees shall verify the true identity of the individual
 394 who is applying for unescorted access authorization to ensure that the applicant is who
 395 he or she claims to be. A licensee shall review official identification documents (*e.g.*,
 396 driver's license; passport; government identification; certificate of birth issued by the
 397 state, province, or country of birth) and compare the documents to personal information
 398 data provided by the individual to identify any discrepancy in the information. Licensees
 399 shall document the type, expiration, and identification number of the identification
 400 document, or maintain a photocopy of identifying documents on file in accordance with
 401 22.13. Licensees shall certify in writing that the identification was properly reviewed, and
 402 shall maintain the certification and all related documents for review upon inspection;

403 3. Employment history verification. Licensees shall complete an employment history
 404 verification, including military history. Licensees shall verify the individual's employment
 405 with each previous employer for the most recent 7 years before the date of application;
 406

Comment [JJ23]:

Cross-references:
 CRCPD SSR Part V.9
 10 CFR Part 37: 37.23(h)

Compatibility = B

Comment [JJ24]:

Cross-references:
 CRCPD SSR Part V.10
 10 CFR Part 37: 37.25(a)

Compatibility = B

417 4. Verification of education. Licensees shall verify that the individual participated in
418 the education process during the claimed period;
419

420 5. Character and reputation determination. Licensees shall complete reference checks
421 to determine the character and reputation of the individual who has applied for
422 unescorted access authorization. Unless other references are not available, reference
423 checks may not be conducted with any person who is known to be a close member of
424 the individual's family, including but not limited to the individual's spouse, parents,
425 siblings, or children, or any individual who resides in the individual's permanent
426 household. Reference checks under this Part must be limited to whether the individual
427 has been and continues to be trustworthy and reliable;

428
429 6. The licensee shall also, to the extent possible, obtain independent information to
430 corroborate that provided by the individual (e.g., seek references not supplied by the
431 individual); and

432
433 7. If a previous employer, educational institution, or any other entity with which the
434 individual claims to have been engaged fails to provide information or indicates an
435 inability or unwillingness to provide information within a time frame deemed
436 appropriate by the licensee but at least after 10 business days of the request or if the
437 licensee is unable to reach the entity, the licensee shall document the refusal,
438 unwillingness, or inability in the record of investigation; and attempt to obtain the
439 information from an alternate source.
440

441
442 22.10.2 **Grandfathering.**

443
444 A. Individuals who have been determined to be trustworthy and reliable for unescorted access
445 to category 1 or category 2 quantities of radioactive material under the fingerprint Orders or
446 equivalent Agreement State requirements may continue to have unescorted access to category
447 1 and category 2 quantities of radioactive material without further investigation. These
448 individuals shall be subject to the reinvestigation requirement.

449
450 B. Individuals who have been determined to be trustworthy and reliable under the provisions of
451 10 CFR Part 73 or the security orders for access to safeguards information, safeguards
452 information-modified handling, or risk-significant material may have unescorted access to
453 category 1 and category 2 quantities of radioactive material without further investigation. The
454 licensee shall document that the individual was determined to be trustworthy and reliable under
455 the provisions of 10 CFR Part 73 or a security order. Security order, in this context, refers to any
456 order that was issued by the NRC that required fingerprints and an FBI criminal history records
457 check for access to safeguards information, safeguards information-modified handling, or risk
458 significant material such as special nuclear material or large quantities of uranium hexafluoride.
459 These individuals shall be subject to the reinvestigation requirement.

460
461 22.10.3 **Reinvestigations.**

462
463 A. Licensees shall conduct a reinvestigation every 10 years for any individual with unescorted
464 access to category 1 or category 2 quantities of radioactive material. The reinvestigation shall
465 consist of fingerprinting and an FBI identification and criminal history records check in
466 accordance with 22.11. The reinvestigations must be completed within 10 years of the date on
467 which these elements were last completed.
468

469 **22.11 Requirements for Criminal History Records Checks of Individuals Granted Unescorted**
470 **Access to Category 1 or Category 2 Quantities of Radioactive Material.**

Comment [JJ25]:
Cross-references:
CRCPD SSR Part V.10
10 CFR Part 37: 37.25(b)

Compatibility = C

Comment [JJ26]:
The phrase "...or equivalent Agreement State requirements..." is added for clarity. This language does not appear in SSRCR Part V. The NRC issued fingerprint Orders, but Colorado did not issue such fingerprint Orders, but instead, implemented equivalent, legally binding requirements through license condition.

Comment [JJ27]:
Cross-references:
CRCPD SSR Part V.10
10 CFR Part 37: 37.25(c)

Compatibility = B

471

472 22.11.1 General performance objective and requirements.

473

474 A. Except for those individuals listed in 22.12 and those individuals grandfathered under
475 22.10.2., each licensee subject to the provisions of this Part shall fingerprint each individual who
476 is to be permitted unescorted access to category 1 or category 2 quantities of radioactive
477 material. Licensees shall transmit all collected fingerprints to the U.S. Nuclear Regulatory
478 Commission for transmission to the FBI. The licensee shall use the information received from
479 the FBI as part of the required background investigation to determine whether to grant or deny
480 further unescorted access to category 1 or category 2 quantities of radioactive materials for that
481 individual.

482

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

486

487 C. Fingerprinting is not required if a licensee is reinstating an individual's unescorted access
488 authorization to category 1 or category 2 quantities of radioactive materials if:

489

490 1. The individual returns to the same facility that granted unescorted access
491 authorization within 365 days of the termination of his or her unescorted access
492 authorization; and

493

494 2. The previous access was terminated under favorable conditions.

495

496 D. Fingerprints do not need to be taken if an individual who is an employee of a licensee,
497 contractor, manufacturer, or supplier has been granted unescorted access to category 1 or
498 category 2 quantities of radioactive material, access to safeguards information, or safeguards
499 information-modified handling by another licensee, based upon a background investigation
500 conducted under this Part, the Fingerprint Orders, or 10 CFR Part 73. An existing criminal
501 history records check file may be transferred to the licensee asked to grant unescorted access
502 in accordance with the provisions of 22.13.3.

503

504 E. Licensees shall use the information obtained as part of a criminal history records check
505 solely for the purpose of determining an individual's suitability for unescorted access
506 authorization to category 1 or category 2 quantities of radioactive materials, access to
507 safeguards information, or safeguards information-modified handling.

508

509 22.11.2 Prohibitions.

510

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

514

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

517

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

519

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

Comment [JJ28]:

Cross-references:
CRCPD SSR Part V.11
10 CFR Part 37: 37.27(a)

Compatibility = B

Comment [JJ29]:

Cross-references:
CRCPD SSR Part V.11
10 CFR Part 37: 37.27(b)

Compatibility = B

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22.11.3 Procedures for processing of fingerprint checks.

Comment [JJ30]:

Cross-references:
CRCPD SSR Part V.11
10 CFR Part 37: 37.27(c)

Compatibility = B

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A. For the purpose of complying with this Part, licensees shall submit to the U.S. Nuclear Regulatory Commission, Director, Division of Facilities and Security, 11545 Rockville Pike, Rockville, MD 20852-2738, ATTN: Criminal History Program, Mail Stop T-03B46M, one completed, legible standard fingerprint card (Form FD-258, ORIMDNRCOOOZ), electronic fingerprint scan or, where practicable, other fingerprint record for each individual requiring unescorted access to category 1 or category 2 quantities of radioactive material. Copies of these forms may be obtained by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by calling 1-301-415-7513, or by email to FORMS.Resource@nrc.gov. Guidance on submitting electronic fingerprints can be found at <http://www.nrc.gov/site-help/esubmittals.html>.

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B. Fees for the processing of fingerprint checks are due upon application. Licensees shall submit payment with the application for the processing of fingerprints through corporate check, certified check, cashier's check, money order, or electronic payment, made payable to "U.S. NRC." (For guidance on making electronic payments, contact the Security Branch, Division of Facilities and Security at 301-415-7513.) Combined payment for multiple applications is acceptable. The U.S. Nuclear Regulatory Commission publishes the amount of the fingerprint check application fee on the NRC's public Web site. (To find the current fee amount, go to the 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.)

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

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22.12 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.

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

Comment [JJ31]:

Cross-references:
CRCPD SSR Part V.12
10 CFR Part 37: 37.29(a)

Compatibility = B

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

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B. A Member of Congress;

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

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

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E. Federal, State, or local law enforcement personnel;

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

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

- 579
- 580 H. Representatives of the International Atomic Energy Agency (IAEA) engaged in
- 581 activities associated with the U.S./IAEA Safeguards Agreement who have been certified
- 582 by the NRC;
- 583
- 584 I. Emergency response personnel who are responding to an emergency;
- 585
- 586 J. Commercial vehicle drivers for road shipments of category 1 and category 2 quantities of
- 587 radioactive material;
- 588
- 589 K. Package handlers at transportation facilities such as freight terminals and railroad yards;
- 590
- 591 L. Any individual who has an active Federal security clearance, provided that he or she makes
- 592 available the appropriate documentation. Written confirmation from the agency/employer that
- 593 granted the Federal security clearance or reviewed the criminal history records check must be
- 594 provided to the licensee. The licensee shall retain this documentation for a period of 3 years
- 595 from the date the individual no longer requires unescorted access to category 1 or category 2
- 596 quantities of radioactive material; and
- 597
- 598 M. Any individual employed by a service provider licensee for which the service provider
- 599 licensee has conducted the background investigation for the individual and approved the
- 600 individual for unescorted access to category 1 or category 2 quantities of radioactive material.
- 601 Written verification from the service provider must be provided to the licensee. The licensee
- 602 shall retain the documentation for a period of 3 years from the date the individual no longer
- 603 requires unescorted access to category 1 or category 2 quantities of radioactive material.
- 604

22.12.2 Fingerprinting, and the identification and criminal history records checks required by section 149 of the Atomic Energy Act of 1954, as amended, are not required for an individual who has had a favorably adjudicated U.S. Government criminal history records check within the last 5 years, under a comparable U.S. Government program involving fingerprinting and an FBI identification and criminal history records check provided that he or she makes available the appropriate documentation. Written confirmation from the agency/employer that reviewed the criminal history records check must be provided to the licensee. The licensee shall retain this documentation for a period of 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material. These programs include, but are not limited to:

- 614
- 615 A. National Agency Check;
- 616
- 617 B. Transportation Worker Identification Credentials (TWIC) under 49 CFR part 1572;
- 618
- 619 C. Bureau of Alcohol, Tobacco, Firearms, and Explosives background check and
- 620 clearances under 27 CFR part 555;
- 621
- 622 D. Health and Human Services security risk assessments for possession and use of select
- 623 agents and toxins under 42 CFR part 73;
- 624
- 625 E. Hazardous Material security threat assessment for hazardous material endorsement to
- 626 commercial driver's license under 49 CFR part 1572; and
- 627
- 628 F. Customs and Border Protection's Free and Secure Trade (FAST) Program.

22.13 Protection of Information.

22.13.1 Each licensee who obtains background information on an individual under this Part shall

Comment [JJ32]:
 Cross-references:
 CRCPD SSR Part V.12
 10 CFR Part 37: 37.29(b)
 Compatibility = B

Comment [JJ33]: Cross-references:
 CRCPD SSR Part V.13
 10 CFR Part 37: 37.31(a) through (d)
 Compatibility = B

633 establish and maintain a system of files and written procedures for protection of the record and the
634 personal information from unauthorized disclosure.

635
636 22.13.2 The licensee may not disclose the record or personal information collected and maintained to
637 persons other than the subject individual, his or her representative, or to those who have a need to
638 have access to the information in performing assigned duties in the process of granting or denying
639 unescorted access to category 1 or category 2 quantities of radioactive material, safeguards
640 information, or safeguards information-modified handling. No individual authorized to have access to
641 the information may disseminate the information to any other individual who does not have a need to
642 know.

643
644 22.13.3 The personal information obtained on an individual from a background investigation may be
645 provided to another licensee:

646
647 A. Upon the individual's written request to the licensee holding the data to disseminate the
648 information contained in his or her file; and

649
650 B. The recipient licensee verifies information such as name, date of birth, social security
651 number, gender, and other applicable physical characteristics.

652
653 22.13.4 The licensee shall make background investigation records obtained under this Part available for
654 examination by an authorized representative of the Department to determine compliance with the
655 regulations and laws.

656
657 22.13.5 The licensee shall retain all fingerprint and criminal history records (including data indicating no
658 record) received from the FBI, or a copy of these records if the individual's file has been transferred, on an
659 individual for 3 years from the date the individual no longer requires unescorted access to category 1 or
660 category 2 quantities of radioactive material.

Comment [JJ34]:
Cross-references:
CRCPD SSR Part V.13
10 CFR Part 37: 37.31(e)
Compatibility = C

663 **22.14 Access Authorization Program Review.**

665 22.14.1 Each licensee shall be responsible for the continuing effectiveness of the access authorization
666 program. Each licensee shall ensure that access authorization programs are reviewed to confirm
667 compliance with the requirements of this Part and that comprehensive actions are taken to correct any
668 noncompliance that is identified. The review program shall evaluate all program performance objectives
669 and requirements. Each licensee shall periodically (at least annually) review the access program content
670 and implementation.

Comment [JJ35]:
Cross-references:
CRCPD SSR Part V.14
10 CFR Part 37: 37.33
Compatibility = C

671
672 22.14.2 The results of the reviews, along with any recommendations, must be documented. Each
673 review report must identify conditions that are adverse to the proper performance of the access
674 authorization program, the cause of the condition(s), and, when appropriate, recommend corrective
675 actions, and corrective actions taken. The licensee shall review the findings and take any additional
676 corrective actions necessary to preclude repetition of the condition, including reassessment of the
677 deficient areas where indicated.

678
679 22.14.3 Review records must be maintained for 3 years.

682 Physical Protection Requirements During Use

684 **22.15 Security Program.**

685
686 22.15.1 **Applicability.**

Comment [JJ36]:
Cross-references:
CRCPD SSR Part V.15
10 CFR Part 37: 37.41
Compatibility = B

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A. 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 Part.

B. An applicant for a new license and each licensee that would become newly subject to the requirements of this Part upon application for modification of its license shall implement the requirements of this Part, as appropriate, before taking possession of an aggregated category 1 or category 2 quantity of radioactive material.

C. Any licensee that has not previously implemented the Security Orders or equivalent Agreement State requirements or been subject to 22.15 through 22.23 shall provide written notification to the Department to the address specified in 22.4 at least 90 days before aggregating radioactive material to a quantity that equals or exceeds the category 2 threshold.

22.15.2 General performance objective.

A. 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.

22.15.3 Program features.

A. Each licensee's security program must include the program features, as appropriate, described in 22.16 through 22.22.

22.16 General Security Program Requirements.

22.16.1 Security plan.

A. Each licensee identified in 22.15.1 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 Part. The security plan must, at a minimum:

- 1. Describe the measures and strategies used to implement the requirements of this Part; and
- 2. Identify the security resources, equipment, and technology used to satisfy the requirements of this Part.

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

C. A licensee shall revise its security plan as necessary to ensure the effective implementation of Department requirements. The licensee shall ensure that:

- 1. The revision has been reviewed and approved by the individual with overall responsibility for the security program; and
- 2. The affected individuals are instructed on the revised plan before the changes are implemented.

Comment [JJ37]:
The phrase "...or equivalent Agreement State requirements..." is added for clarity. This language does not appear in SSR Part V. The NRC issued Security Orders, but Colorado did not issue such Orders, and instead, implemented equivalent, legally binding requirements through license conditions.

Comment [JJ38]:
Cross-references:
CRCPD SSR Part V.15
10 CFR Part 37: 37.41(b)

Compatibility = B

Comment [JJ39]:
Cross-references:
CRCPD SSR Part V.15
10 CFR Part 37: 37.41(c)

Compatibility = C

Comment [JJ40]:
Cross-references:
CRCPD SSR Part V.16
10 CFR Part 37: 37.43(a)

Compatibility = B

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D. The licensee shall retain a copy of the current security plan as a record for 3 years after the security plan is no longer required. If any portion of the plan is superseded, the licensee shall retain the superseded material for 3 years after the record is superseded.

22.16.2 Implementing procedures.

A. The licensee shall develop and maintain written procedures that document how the requirements of this Part and the security plan will be met.

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

C. The licensee shall retain a copy of the current procedure as a record for 3 years after the procedure is no longer needed. Superseded portions of the procedure must be retained for 3 years after the record is superseded.

Comment [JJ41]:

Cross-references:
CRCPD SSR Part V.16
10 CFR Part 37: 37.43(b)

Compatibility = C

22.16.3 Training.

A. Each licensee shall conduct training to ensure that those individuals implementing the security program possess and maintain the knowledge, skills, and abilities to carry out their assigned duties and responsibilities effectively. The training must include instruction in:

1. The licensee's security program and procedures to secure category 1 or category 2 quantities of radioactive material, and in the purposes and functions of the security measures employed;
2. The responsibility to report promptly to the licensee any condition that causes or may cause a violation of Department requirements;
3. The responsibility of the licensee to report promptly to the local law enforcement agency and licensee any actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material; and
4. The appropriate response to security alarms.

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

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

1. Review of the training requirements of 22.16.3.A. and any changes made to the security program since the last training;
2. Reports on any relevant security issues, problems, and lessons learned;
3. Relevant results of Department inspections; and

Comment [JJ42]:

Cross-references:
CRCPD SSR Part V.16
10 CFR Part 37: 37.43(c)(1) through (c)(3)

Compatibility = B

791 4. Relevant results of the licensee's program review and testing and
792 maintenance.

793
794 D. The licensee shall maintain records of the initial and refresher training for 3 years from the
795 date of the training. The training records must include dates of the training, topics covered, a
796 list of licensee personnel in attendance, and related information.

797
798 22.16.4 Protection of information.

799
800 A. Licensees authorized to possess category 1 or category 2 quantities of radioactive
801 material shall limit access to and unauthorized disclosure of their security plan,
802 implementing procedures, and the list of individuals that have been approved for
803 unescorted access.
804

805 B. Efforts to limit access shall include the development, implementation, and maintenance of
806 written policies and procedures for controlling access to, and for proper handling and
807 protection against unauthorized disclosure of, the security plan and implementing
808 procedures.
809

810 C. Before granting an individual access to the security plan or implementing procedures,
811 licensees shall:

- 812 1. Evaluate an individual's need to know the security plan or implementing
- 813 procedures; and
- 814
- 815 2. If the individual has not been authorized for unescorted access to category 1 or
- 816 category 2 quantities of radioactive material, safeguards information, or safeguards
- 817 information-modified handling, the licensee must complete a background investigation
- 818 to determine the individual's trustworthiness and reliability. A trustworthiness and
- 819 reliability determination shall be conducted by the reviewing official and shall include
- 820 the background investigation elements contained in 22.10.1.A.2. through 22.10.1.A.7.
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822

823 D. Licensees need not subject the following individuals to the background investigation
824 elements for protection of information:

- 825 1. The categories of individuals listed in 22.12.1.A. through 22.12.1.M; or
- 826
- 827 2. Security service provider employees, provided written verification that the employee
- 828 has been determined to be trustworthy and reliable, by the required background
- 829 investigation in 22.10.1.A.2 through 22.10.1.A.7, has been provided by the security
- 830 service provider.
831

832
833 E. The licensee shall document the basis for concluding that an individual is trustworthy and
834 reliable and should be granted access to the security plan or implementing procedures.
835

836 F. Licensees shall maintain a list of persons currently approved for access to the security plan
837 or implementing procedures. When a licensee determines that a person no longer needs
838 access to the security plan or implementing procedures or no longer meets the access
839 authorization requirements for access to the information, the licensee shall remove the person
840 from the approved list as soon as possible, but no later than 7 working days, and take prompt
841 measures to ensure that the individual is unable to obtain the security plan or implementing
842 procedures.
843

844 G. When not in use, the licensee shall store its security plan and implementing

Comment [JJ43]:
Cross-references:
CRCPD SSR Part V.16
10 CFR Part 37: 37.43(c)(4)

Compatibility = C

Comment [JJ44]:
Cross-references:
CRCPD SSR Part V.16
10 CFR Part 37: 37.43(d)(1) through (d)(8)

Compatibility = C

845 procedures in a manner to prevent unauthorized access. Information stored in
846 nonremovable electronic form must be password protected.

847
848 H. The licensee shall retain as a record for 3 years after the document is no longer
849 needed:

- 850 1. A copy of the information protection procedures; and
- 851
- 852 2. The list of individuals approved for access to the security plan or
- 853 implementing procedures.
- 854

855
856 **22.17 LLEA Coordination.**

857
858 22.17.1 A licensee subject to this Part shall coordinate, to the extent practicable, with an LLEA for
859 responding to threats to the licensee's facility, including any necessary armed response. The
860 information provided to the LLEA must include:

- 861 A. A description of the facilities and the category 1 and category 2 quantities of radioactive
- 862 materials along with a description of the licensee's security measures that have been
- 863 implemented to comply with this Part; and
- 864
- 865 B. A notification that the licensee will request a timely armed response by the LLEA to any
- 866 actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of
- 867 material.
- 868

869 22.17.2 The licensee shall notify the Department within 3 business days if:

- 870 A. The LLEA has not responded to the request for coordination within 60 days of the
- 871 coordination request; or
- 872
- 873 B. The LLEA notifies the licensee that the LLEA does not plan to participate in
- 874 coordination activities.
- 875

876
877
878 22.17.3 The licensee shall document its efforts to coordinate with the LLEA. The documentation
879 must be kept for 3 years.

880
881 22.17.4 The licensee shall coordinate with the LLEA at least every 12 months, or when changes to
882 the facility design or operation adversely affect the potential vulnerability of the licensee's material to
883 theft, sabotage, or diversion.

884
885 **22.18 Security Zones.**

886
887 22.18.1 Licensees shall ensure that all aggregated category 1 and category 2 quantities of radioactive
888 material are used or stored within licensee-established security zones. Security zones may be
889 permanent or temporary.

890
891 22.18.2 Temporary security zones must be established as necessary to meet the licensee's transitory
892 or intermittent business activities, such as periods of maintenance, source delivery, and source
893 replacement.

894
895 22.18.3 Security zones must, at a minimum, allow unescorted access only to approved individuals
896 through:

Comment [JJ45]:
Cross-references:
CRCPD SSR Part V.17
10 CFR Part 37: 37.45(a), (b)
Compatibility = B

Comment [JJ46]:
Cross-references:
CRCPD SSR Part V.17
10 CFR Part 37: 37.45(c)
Compatibility = C

Comment [JJ47]:
Cross-references:
CRCPD SSR Part V.17
10 CFR Part 37: 37.45(d)
Compatibility = B

Comment [JJ48]: NEW TERM
The term "security zone" is a new term not previously used in the legally binding license conditions currently in place. The term is defined in Section 22.3.

Comment [JJ49]: Cross-references:
CRCPD SSR Part V.18
10 CFR Part 37: 37.47
Compatibility = B

897
898 A. Isolation of category 1 and category 2 quantities of radioactive materials by the use of
899 continuous physical barriers that allow access to the security zone only through established
900 access control points. A physical barrier is a natural or man-made structure or formation
901 sufficient for the isolation of the category 1 or category 2 quantities of radioactive material within
902 a security zone; or

903
904 B. Direct control of the security zone by approved individuals at all times; or
905

906 C. A combination of continuous physical barriers and direct control.
907

908 22.18.4 For category 1 quantities of radioactive material during periods of maintenance, source
909 receipt, preparation for shipment, installation, or source removal or exchange, the licensee shall, at a
910 minimum, provide sufficient individuals approved for unescorted access to maintain continuous
911 surveillance of sources in temporary security zones and in any security zone in which physical barriers
912 or intrusion detection systems have been disabled to allow such activities.

913
914 22.18.5 Individuals not approved for unescorted access to category 1 or category 2 quantities of
915 radioactive material must be escorted by an approved individual when in a security zone.

916
917 **Sec-22.19 Monitoring, Detection, and Assessment.**
918

919 22.19.1 Monitoring and detection.
920

921 A. Licensees shall establish and maintain the capability to continuously monitor and detect
922 without delay all unauthorized entries into its security zones. Licensees shall provide the
923 means to maintain continuous monitoring and detection capability in the event of a loss of the
924 primary power source, or provide for an alarm and response in the event of a loss of this
925 capability to continuously monitor and detect unauthorized entries.

926
927 B. Monitoring and detection must be performed by:

928 1. A monitored intrusion detection system that is linked to an onsite or offsite central
929 monitoring facility; or
930

931 2. Electronic devices for intrusion detection alarms that will alert nearby facility
932 personnel; or
933

934 3. A monitored video surveillance system; or
935

936 4. Direct visual surveillance by approved individuals located within the security zone;
937 or
938

939 5. Direct visual surveillance by a licensee designated individual located outside the
940 security zone.
941

942
943 C. A licensee subject to this Part shall also have a means to detect unauthorized removal of the
944 radioactive material from the security zone. This detection capability must provide:

945
946 1. For category 1 quantities of radioactive material, immediate detection of any attempted
947 unauthorized removal of the radioactive material from the security zone. Such immediate
948 detection capability must be provided by:
949

Comment [JJ50]:

Cross-references:
CRCPD SSR Part V.19
10 CFR Part 37: 37.49(a)

Compatibility = B

- 950 a. Electronic sensors linked to an alarm; or
- 951
- 952 b. Continuous monitored video surveillance; or
- 953
- 954 c. Direct visual surveillance.
- 955
- 956 2. For category 2 quantities of radioactive material, weekly verification through physical
- 957 checks, tamper indicating devices, use, or other means to ensure that the radioactive
- 958 material is present.

959
 960 **22.19.2 Assessment.** Licensees shall immediately assess each actual or attempted unauthorized entry
 961 into the security zone to determine whether the unauthorized access was an actual or attempted theft,
 962 sabotage, or diversion.

Comment [JJ51]:
 Cross-references:
 CRCPD SSR Part V.19
 10 CFR Part 37: 37.49(b)
 Compatibility = B

963
 964 **22.19.3 Personnel communications and data transmission.** For personnel and automated or electronic
 965 systems supporting the licensee’s monitoring, detection, and assessment systems, licensees shall:

Comment [JJ52]:
 Cross-references:
 CRCPD SSR Part V.19
 10 CFR Part 37: 37.49(c)
 Compatibility = B

- 966 A. Maintain continuous capability for personnel communication and electronic data
- 967 transmission and processing among site security systems; and
- 968
- 969 B. Provide an alternative communication capability for personnel, and an alternative data
- 970 transmission and processing capability, in the event of a loss of the primary means of
- 971 communication or data transmission and processing. Alternative communications and data
- 972 transmission systems may not be subject to the same failure modes as the primary systems.
- 973

974
 975 **22.19.4 Response.**
 976 A. Licensees shall immediately respond to any actual or attempted unauthorized access to the
 977 security zones, or actual or attempted theft, sabotage, or diversion of category 1 or category 2
 978 quantities of radioactive material at licensee facilities or temporary job sites. For any
 979 unauthorized access involving an actual or attempted theft, sabotage, or diversion of category 1
 980 or category 2 quantities of radioactive material, the licensee’s response shall include
 981 requesting, without delay, an armed response from the LLEA.

Comment [JJ53]:
 Cross-references:
 CRCPD SSR Part V.19
 10 CFR Part 37: 37.49(d)
 Compatibility = B

982
 983 **22.20 Maintenance and Testing.**

Comment [JJ54]:
 Cross-references:
 CRCPD SSR Part V.20
 10 CFR Part 37: 37.51
 Compatibility = C

985 22.20.1 Each licensee subject to this Part shall implement a maintenance and testing program to ensure
 986 that intrusion alarms, associated communication systems, and other physical components of the
 987 systems used to secure or detect unauthorized access to radioactive material are maintained in operable
 988 condition and are capable of performing their intended function when needed. The equipment relied on
 989 to meet the security requirements of this Part must be inspected and tested for operability and
 990 performance at the manufacturer’s suggested frequency. If there is no suggested manufacturer’s
 991 suggested frequency, the testing must be performed at least annually, not to exceed 12 months.

992
 993 22.20.2 The licensee shall maintain records on the maintenance and testing activities for 3 years.

994
 995 **22.21 Requirements for Mobile Devices.**

Comment [JJ55]:
 Cross-references:
 CRCPD SSR Part V.21
 10 CFR Part 37: 37.53
 Compatibility = B

996
 997 22.21.1 Each licensee that possesses mobile devices containing category 1 or category 2 quantities
 998 of radioactive material must:

- 999 A. Have two independent physical controls that form tangible barriers to secure the
- 1000 material from unauthorized removal when the device is not under direct control and
- 1001

1002 constant surveillance by the licensee; and

1003

1004 B. For devices in or on a vehicle or trailer, unless the health and safety requirements for a site
1005 prohibit the disabling of the vehicle, the licensee shall utilize a method to disable the vehicle or
1006 trailer when not under direct control and constant surveillance by the licensee. Licensees shall
1007 not rely on the removal of an ignition key to meet this requirement.

1008

1009 **22.22 Security Program Review.**

1010

1011 22.22.1 Each licensee shall be responsible for the continuing effectiveness of the security program. Each
1012 licensee shall ensure that the security program is reviewed to confirm compliance with the requirements
1013 of this Part and that comprehensive actions are taken to correct any noncompliance that is identified. The
1014 review must include the radioactive material security program content and implementation. Each licensee
1015 shall periodically (at least annually) review the security program content and implementation.

1016

1017 22.22.2 The results of the review, along with any recommendations, must be documented. Each
1018 review report must identify conditions that are adverse to the proper performance of the security
1019 program, the cause of the condition(s), and, when appropriate, recommend corrective actions, and
1020 corrective actions taken. The licensee shall review the findings and take any additional corrective
1021 actions necessary to preclude repetition of the condition, including reassessment of the deficient
1022 areas where indicated.

1023

1024 22.22.3 The licensee shall maintain the review documentation for 3 years.

1025 **22.23 Reporting of Events.**

1026 22.23.1 The licensee shall immediately notify the LLEA after determining that an unauthorized entry
1027 resulted in an actual or attempted theft, sabotage, or diversion of a category 1 or category 2 quantity of
1028 radioactive material. As soon as possible after initiating a response, but not at the expense of causing
1029 delay or interfering with the LLEA response to the event, the licensee shall notify the Department. In no
1030 case shall the notification to the Department be later than 4 hours after the discovery of any attempted
1031 or actual theft, sabotage, or diversion.

1032

1033 22.23.2 The licensee shall assess any suspicious activity related to possible theft, sabotage, or
1034 diversion of category 1 or category 2 quantities of radioactive material and notify the LLEA as
1035 appropriate. As soon as possible but not later than 4 hours after notifying the LLEA, the licensee shall
1036 notify the Department

1037

1038 22.24.3 The initial telephonic notification required by 22.23.1 must be followed within a period of 30
1039 days by a written report submitted to the Department address specified in 22.4. The report must include
1040 sufficient information for Department analysis and evaluation, including identification of any necessary
1041 corrective actions to prevent future instances.

1042

1043 Physical Protection in Transit

1044

1045 **22.24 Additional Requirements for Transfer of Category 1 and Category 2 Quantities of
1046 Radioactive Material.**

1047

1048 22.24.1 A licensee transferring a category 1 or category 2 quantity of radioactive material to a licensee
1049 of the Department, U.S. Nuclear Regulatory Commission, or an Agreement State shall meet the license
1050 verification provisions listed below instead of those listed in Part 3, Section 3.22.4. of these regulations:

1051

1052 A. Any licensee transferring category 1 quantities of radioactive material to a licensee of the
1053 Department, U.S. Nuclear Regulatory Commission, or an Agreement State, prior to conducting

Comment [JJ56]:

Cross-references:
CRCPD SSR Part V.22
10 CFR Part 37: 37.55

Compatibility = C

Comment [JJ57]:

Cross-references:
CRCPD SSR Part V.23
10 CFR Part 37: 37.57

Compatibility = C

Comment [JJ58]:

Cross-references:
CRCPD SSR Part V.24
10 CFR Part 37: 37.71(a) through (c)

Compatibility = B

1054 such transfer, shall verify with the NRC's license verification system or the license issuing
 1055 authority that the transferee's license authorizes the receipt of the type, form, and quantity of
 1056 radioactive material to be transferred and that the licensee is authorized to receive radioactive
 1057 material at the location requested for delivery. If the verification is conducted by contacting the
 1058 license issuing authority, the transferor shall document the verification. For transfers within the
 1059 same organization, the licensee does not need to verify the transfer.

1060
 1061 B. Any licensee transferring category 2 quantities of radioactive material to a licensee of the
 1062 Department, U.S. Nuclear Regulatory Commission, or an Agreement State, prior to conducting
 1063 such transfer, shall verify with the NRC's license verification system or the license issuing
 1064 authority that the transferee's license authorizes the receipt of the type, form, and quantity of
 1065 radioactive material to be transferred. If the verification is conducted by contacting the license
 1066 issuing authority, the transferor shall document the verification. For transfers within the same
 1067 organization, the licensee does not need to verify the transfer.

1068
 1069 C. In an emergency where the licensee cannot reach the license issuing authority and the
 1070 license verification system is nonfunctional, the licensee may accept a written certification by the
 1071 transferee that it is authorized by license to receive the type, form, and quantity of radioactive
 1072 material to be transferred. The certification must include the license number, current revision
 1073 number, issuing agency, expiration date, and for a category 1 shipment the authorized address.
 1074 The licensee shall keep a copy of the certification. The certification must be confirmed by use of
 1075 the NRC's license verification system or by contacting the license issuing authority by the end of
 1076 the next business day.

1077
 1078 D. The transferor shall keep a copy of the verification documentation as a record for 3 years.

1080 **22.25 Applicability of Physical Protection of Category 1 and Category 2 Quantities of**
 1081 **Radioactive Material During Transit.**

1082
 1083 22.25.1 For shipments of category 1 quantities of radioactive material, each shipping licensee shall
 1084 comply with the requirements for physical protection contained in 22.26.1. and 22.26.5.; 22.27;
 1085 22.28.1.A., 22.28.2.A. and 22.28.3.; and 22.29.1., 22.29.3., 22.29.5., 22.29.7., and 22.29.8.

1086
 1087 22.25.2 For shipments of category 2 quantities of radioactive material, each shipping licensee shall
 1088 comply with the requirements for physical protection contained in 22.26.2. through 22.26.5.; 22.28.1.B.,
 1089 22.28.1.C., 22.28.2.B., and 22.28.3.; and 22.29.2., 22.29.4., 22.29.6., 22.29.7., and 22.29.8. For those
 1090 shipments of category 2 quantities of radioactive material that meet the criteria of Part 17, Section 17.11,
 1091 the shipping licensee shall also comply with the advance notification provisions of Part 17, Section 17.11.

1092
 1093 22.25.3 The shipping licensee shall be responsible for meeting the requirements of this Part 22.24
 1094 through 22.29 unless the receiving licensee has agreed in writing to arrange for the in-transit physical
 1095 protection required under this Part 22.24 through 22.29.

1096
 1097 22.25.4 Each licensee that imports or exports category 1 quantities of radioactive material shall comply
 1098 with the requirements for physical protection during transit contained in 22.26.1.B. 22.26.5.; 22.27;
 1099 22.28.1.A., 22.28.2.A., 22.28.3.; and 22.29.1., 22.29.3., 22.29.5., 22.29.7., and 22.29.8. for the domestic
 1100 portion of the shipment.

1101
 1102 22.25.5 Each licensee that imports or exports category 2 quantities of radioactive material shall comply
 1103 with the requirements for physical protection during transit contained in 22.28.1.B., 22.28.1.C., 22.28.2.B.;
 1104 and 22.29.2., 22.29.4., 22.29.6., 22.29.7. and 22.29.8. for the domestic portion of the shipment.

1105
 1106 **22.26 Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of**
 1107 **Radioactive Material.**

1108

Comment [JJ59]:
 Cross-references:
 CRCPD SSR Part V.24
 10 CFR Part 37: 37.71(d)
 Compatibility = C

Comment [JJ60]:
 Cross-references:
 CRCPD SSR Part V.25
 10 CFR Part 37: 37.73(a), (b)
 Compatibility = D

Comment [JJ61]:
 Cross-references:
 CRCPD SSR Part V.25
 10 CFR Part 37: 37.73(c)

The equivalent language in 10 CFR 37.73(c) makes reference to subpart D of 10 CFR Part 37. Colorado rules do not follow this structure and therefore some sections of Colorado rule may not be numbered or are not otherwise grouped (as subparts). Due to this difference in numbering of sections/subsections, the reference to specific equivalent rule sections (to subpart D) are added here. This is an NRC requested change required for compatibility.

Ref: NRC Letter dated April 13, 2015
 Compatibility = B

Comment [JJ62]:
 Cross-references:
 CRCPD SSR Part V.25
 10 CFR Part 37: 37.73(d), (e)
 Compatibility = D

1109 22.26.1 Each licensee that plans to transport, or deliver to a carrier for transport, licensed material
 1110 that is a category 1 quantity of radioactive material outside the confines of the licensee's facility or
 1111 other place of use or storage shall:

1112 A. Preplan and coordinate shipment arrival and departure times with the receiving
 1113 licensee;

1114 B. Preplan and coordinate shipment information with the governor or the governor's
 1115 designee of any State through which the shipment will pass to:

1116 1. Discuss the State's intention to provide law enforcement escorts; and

1117 2. Identify safe havens; and

1118 C. Document the preplanning and coordination activities.

1119 22.26.2 Each licensee that plans to transport, or deliver to a carrier for transport, licensed material
 1120 that is a category 2 quantity of radioactive material outside the confines of the licensee's facility or
 1121 other place of use or storage shall coordinate the shipment no-later-than arrival time and the
 1122 expected shipment arrival with the receiving licensee. The licensee shall document the coordination
 1123 activities.

1124 22.26.3 Each licensee who receives a shipment of a category 2 quantity of radioactive material shall
 1125 confirm receipt of the shipment with the originator. If the shipment has not arrived by the no- later-than
 1126 arrival time, the receiving licensee shall notify the originator.

1127 22.26.4 Each licensee, who transports or plans to transport a shipment of a category 2 quantity of
 1128 radioactive material, and determines that the shipment will arrive after the no-later-than arrival time
 1129 provided pursuant to 22.26.2., shall promptly notify the receiving licensee of the new no-later-than
 1130 arrival time.

1131 22.26.5 The licensee shall retain a copy of the documentation for preplanning and coordination and
 1132 any revision thereof, as a record for 3 years.

1133 22.27 Advance Notification of Shipment of Category 1 Quantities of Radioactive Material.

1134 22.27.1 As specified in 22.27.1.A. and 22.27.1.B., each licensee shall provide advance notification to the
 1135 Department and the governor of a State, or the governor's designee, of the shipment of licensed
 1136 material in a category 1 quantity, through or across the boundary of the State, before the transport, or
 1137 delivery to a carrier for transport of the licensed material outside the confines of the licensee's facility or
 1138 other place of use or storage.

1139 A. Procedures for submitting advance notification.

1140 1. The notification to the office of each appropriate governor or governor's designee is
 1141 available on the NRC's Web site at <http://nrc-stp.ornl.gov/special/designee.pdf>. A list of
 1142 the contact information is also available upon request from the Director, Division of
 1143 Intergovernmental Liaison Material Safety, State, Tribal, and Rulemaking Programs,
 1144 Office of Nuclear Material Safety and Safeguards Federal and State Materials and
 1145 Environmental Management Programs, U.S. Nuclear Regulatory Commission,
 1146 Washington, DC 20555-0001. The notification to the Department must be made to the
 1147 address specified in 22.4.

1148 2. A notification delivered by mail must be postmarked at least 7 days before transport

Comment [JJ63]:

Cross-references:
 CRCPD SSR Part V.26
 10 CFR Part 37: 37.75(a) through (d)

Compatibility = B

Comment [JJ64]:

Cross-references:
 CRCPD SSR Part V.26
 10 CFR Part 37: 37.75(e)

Compatibility = C

Comment [JJ65]:

Cross-references:
 CRCPD SSR Part V.27
 10 CFR Part 37: 37.77(a) through (d)

Compatibility = B

1163 of the shipment commences at the shipping facility.
 1164
 1165 3. A notification delivered by any means other than mail must reach Department at least
 1166 4 days before the transport of the shipment commences and must reach the office of the
 1167 governor or the governor's designee at least 4 days before transport of a shipment
 1168 within or through the State.
 1169
 1170 B. Information to be furnished in advance notification of shipment. Each advance notification of
 1171 shipment of category 1 quantities of radioactive material must contain the following information,
 1172 if available at the time of notification:
 1173
 1174 1. The name, address, and telephone number of the shipper, carrier, and receiver of
 1175 the category 1 radioactive material;
 1176
 1177 2. The license numbers of the shipper and receiver;
 1178
 1179 3. A description of the radioactive material contained in the shipment, including the
 1180 radionuclides and quantity;
 1181
 1182 4. The point of origin of the shipment and the estimated time and date that shipment will
 1183 commence;
 1184
 1185 5. The estimated time and date that the shipment is expected to enter each State
 1186 along the route;
 1187
 1188 6. The estimated time and date of arrival of the shipment at the destination; and
 1189
 1190 7. A point of contact, with a telephone number, for current shipment information.
 1191
 1192 C. Revision notice.
 1193
 1194 1. The licensee shall provide any information not previously available at the time of the
 1195 initial notification, as soon as the information becomes available but not later than
 1196 commencement of the shipment, to the governor of the State or the governor's
 1197 designee, and to the Department.
 1198
 1199 2. A licensee shall promptly notify the governor of the State or the governor's designee
 1200 of any changes to the information provided in accordance with 22.27.1.B and
 1201 22.27.1.C.1 of this section. The licensee shall also immediately notify the Department
 1202 of any such changes.
 1203
 1204 D. Cancellation notice. Each licensee who cancels a shipment for which advance notification
 1205 has been sent shall send a cancellation notice to the governor of each State or to the
 1206 governor's designee previously notified and to the Department. The licensee shall send the
 1207 cancellation notice before the shipment would have commenced or as soon thereafter as
 1208 possible. The licensee shall state in the notice that it is a cancellation and identify the
 1209 advance notification that is being cancelled.
 1210
 1211 **E. Records.** The licensee shall retain a copy of the advance notification and any revision
 1212 and cancellation notices as a record for 3 years.
 1213
 1214 F. Protection of information. State officials, State employees, and other individuals, whether
 1215 or not licensees of NRC or an Agreement State, who receive schedule information of the

Comment [JJ66]:
 Cross-references:
 CRCPD SSR Part V.27
 10 CFR Part 37: 37.77(e)
 Compatibility = C

1216 kind specified in 22.27.1.B shall protect that information against unauthorized disclosure as
 1217 specified in 22.16.4. ~~of this part.~~

1218

1219 **22.28 Requirements for Physical Protection of Category 1 and Category 2 Quantities of**
 1220 **Radioactive Material During Shipment.**

1221

1222 **22.28.1** Shipments by road.

1223

1224 A. Each licensee who transports, or delivers to a carrier for transport, in a single
 1225 shipment, a category 1 quantity of radioactive material shall:

1226

1227 1. Ensure that movement control centers are established that maintain position
 1228 information from a remote location. These control centers must monitor shipments 24
 1229 hours a day, 7 days a week, and have the ability to communicate immediately, in an
 1230 emergency, with the appropriate law enforcement agencies.

1231

1232 2. Ensure that redundant communications are established that allow the transport to
 1233 contact the escort vehicle (when used) and movement control center at all times.
 1234 Redundant communications may not be subject to the same interference factors as the
 1235 primary communication.

1236

1237 3. Ensure that shipments are continuously and actively monitored by a telemetric
 1238 position monitoring system or an alternative tracking system reporting to a movement
 1239 control center. A movement control center must provide positive confirmation of the
 1240 location, status, and control over the shipment. The movement control center must be
 1241 prepared to promptly implement preplanned procedures in response to deviations from
 1242 the authorized route or a notification of actual, attempted, or suspicious activities related
 1243 to the theft, loss, or diversion of a shipment. These procedures will include, but not be
 1244 limited to, the identification of and contact information for the appropriate LLEA along
 1245 the shipment route.

1246

1247 4. Provide an individual to accompany the driver for those highway shipments with a
 1248 driving time period greater than the maximum number of allowable hours of service
 1249 in a 24-hour duty day as established by the Department of Transportation Federal
 1250 Motor Carrier Safety Administration. The accompanying individual may be another
 1251 driver.

1252

1253 5. Develop written normal and contingency procedures to address:

1254

1255 a. Notifications to the communication center and law enforcement
 1256 agencies;

1257

1258 b. Communication protocols. Communication protocols must include a
 1259 strategy for the use of authentication codes and duress codes and provisions
 1260 for refueling or other stops, detours, and locations where communication is
 1261 expected to be temporarily lost;

1262

1263 c. Loss of communications; and

1264

1265 d. Responses to an actual or attempted theft or diversion of a shipment.

1266

1267 e. Each licensee who makes arrangements for the shipment of category 1
 1268 quantities of radioactive material shall ensure that drivers, accompanying
 1269 personnel, and movement control center personnel have access to the normal

Comment [JJ67]:

Cross-references:
 CRCPD SSR Part V.28
 10 CFR Part 37: 37.79(a)

Compatibility = B

1270 and contingency procedures.

1271

1272 B. Each licensee that transports category 2 quantities of radioactive material shall
1273 maintain constant control and/or surveillance during transit and have the capability for
1274 immediate communication to summon appropriate response or assistance.

1275

1276 C. Each licensee who delivers to a carrier for transport, in a single shipment, a category
1277 2 quantity of radioactive material shall:

1278

1279 1. Use carriers that have established package tracking systems. An established
1280 package tracking system is a documented, proven, and reliable system routinely
1281 used to transport objects of value. In order for a package tracking system to maintain
1282 constant control and/or surveillance, the package tracking system must allow the
1283 shipper or transporter to identify when and where the package was last and when it
1284 should arrive at the next point of control.

1285

1286 2. Use carriers that maintain constant control and/or surveillance during transit and
1287 have the capability for immediate communication to summon appropriate response or
1288 assistance; and

1289

1290 3. Use carriers that have established tracking systems that require an
1291 authorized signature prior to releasing the package for delivery or return.

1292

1293 **22.28.2** Shipments by rail.

1294

1295 A. Each licensee who transports, or delivers to a carrier for transport, in a single
1296 shipment, a category 1 quantity of radioactive material shall:

1297

1298 1. Ensure that rail shipments are monitored by a telemetric position monitoring system
1299 or an alternative tracking system reporting to the licensee, third-party, or railroad
1300 communications center. The communications center shall provide positive confirmation
1301 of the location of the shipment and its status. The communications center shall
1302 implement preplanned procedures in response to deviations from the authorized route
1303 or to a notification of actual, attempted, or suspicious activities related to the theft or
1304 diversion of a shipment. These procedures will include, but not be limited to, the
1305 identification of and contact information for the appropriate LLEA along the shipment
1306 route.

1307

1308 2. Ensure that periodic reports to the communications center are made at preset
1309 intervals.

1310

1311 B. Each licensee who transports, or delivers to a carrier for transport, in a single
1312 shipment, a category 2 quantity of radioactive material shall:

1313

1314 1. Use carriers that have established package tracking systems. An established
1315 package tracking system is a documented, proven, and reliable system routinely used
1316 to transport objects of value. In order for a package tracking system to maintain
1317 constant control and/or surveillance, the package tracking system must allow the
1318 shipper or transporter to identify when and where the package was last and when it
1319 should arrive at the next point of control.

1320

1321 2. Use carriers that maintain constant control and/or surveillance during transit and
1322 have the capability for immediate communication to summon appropriate response or
1323 assistance; and

Comment [JJ68]:
Cross-references:
CRCPD SSR Part V.28
10 CFR Part 37: 37.79(b)

Compatibility = B

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3. Use carriers that have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

22.28.3 Investigations.

A. Each licensee who makes arrangements for the shipment of category 1 quantities of radioactive material shall immediately conduct an investigation upon the discovery that a category 1 shipment is lost or missing. Each licensee who makes arrangements for the shipment of category 2 quantities of radioactive material shall immediately conduct an investigation, in coordination with the receiving licensee, of any shipment that has not arrived by the designated no-later-than arrival time.

Comment [JJ69]:

Cross-references:
CRCPD SSR Part V.28c
10 CFR Part 37: 37.79(c)

Compatibility = B

22.29 Reporting of Events.

22.29.1 The shipping licensee shall notify the appropriate LLEA and the Department within 1 hour of its determination that a shipment of category 1 quantities of radioactive material is lost or missing. The appropriate LLEA would be the law enforcement agency in the area of the shipment's last confirmed location. During the investigation required by 22.28.3., the shipping licensee will provide agreed upon updates to the Department on the status of the investigation.

Comment [JJ70]:

Cross-references:
CRCPD SSR Part V.29
10 CFR Part 37: 37.81(a) through (f)

Compatibility = B

22.29.2 The shipping licensee shall notify the Department within 4 hours of its determination that a shipment of category 2 quantities of radioactive material is lost or missing. If, after 24 hours of its determination that the shipment is lost or missing, the radioactive material has not been located and secured, the licensee shall immediately notify the Department.

22.29.3 The shipping licensee shall notify the designated LLEA along the shipment route as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment or suspicious activities related to the theft or diversion of a shipment of a category 1 quantity of radioactive material. As soon as possible after notifying the LLEA, the licensee shall notify the Department upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment of category 1 radioactive material.

22.29.4 The shipping licensee shall notify the Department as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment, of a category 2 quantity of radioactive material.

22.29.5 The shipping licensee shall notify the Department and the LLEA as soon as possible upon recovery of any lost or missing category 1 quantities of radioactive material.

22.29.6 The shipping licensee shall notify the Department as soon as possible upon recovery of any lost or missing category 2 quantities of radioactive material.

22.29.7 The initial telephone notification required by 22.29.1. through 22.29.4. must be followed within a period of 30 days by a written report submitted to the Department to the address listed in 22.4. Note that a written report is not required for notifications on suspicious activities required by 22.29.3. and 22.29.4. The report must set forth the following information:

Comment [JJ71]:

Cross-references:
CRCPD SSR Part V.29
10 CFR Part 37: 37.81(g), (h)

Compatibility = C

A. A description of the licensed material involved, including kind, quantity, and chemical and physical form;

B. A description of the circumstances under which the loss or theft occurred;

C. A statement of disposition, or probable disposition, of the licensed material involved;

1378

1379 D. Actions that have been taken, or will be taken, to recover the material; and

1380

1381 E. Procedures or measures that have been, or will be, adopted to ensure against a
1382 recurrence of the loss or theft of licensed material.

1383

1384 22.29.8 Subsequent to filing the written report, the licensee shall also report any additional
1385 substantive information on the loss or theft within 30 days after the licensee learns of such
1386 information.

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1389

Records

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1391 **22.30 Form of Records.**

1392

1393 22.30.1 Each record required by this Part must be legible throughout the retention period specified by
1394 each Department regulation. The record may be the original or a reproduced copy or a microform,
1395 provided that the copy or microform is authenticated by authorized personnel and that the microform is
1396 capable of producing a clear copy throughout the required retention period. The record may also be
1397 stored in electronic media with the capability for producing legible, accurate, and complete records
1398 during the required retention period. Records such as letters, drawings, and specifications, must include
1399 all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate
1400 safeguards against tampering with and loss of records.

Comment [JJ72]:
Cross-references:
CRCPD SSR Part V.30
10 CFR Part 37: 37.101

Compatibility = C

1401

1402 **22.31 Record Retention.**

1403

1404 22.31.1 Licensees shall maintain the records that are required by the regulations in this Part for the
1405 period specified by the appropriate regulation. If a retention period is not otherwise specified, these
1406 records must be retained until the Department terminates the facility's license. All records related to
1407 this Part may be destroyed upon Department termination of the facility license.

Comment [JJ73]:
Cross-references:
CRCPD SSR Part V.31
10 CFR Part 37: 37.103

Compatibility = C

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1409

Enforcement

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1411 **22.32 Inspections.**

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1413 22.32.1 Each licensee shall afford to the Department at all reasonable times opportunity to inspect
1414 category 1 or category 2 quantities of radioactive material and the premises and facilities wherein
1415 the radioactive material is used, produced, or stored.

Comment [JJ74]:
Cross-references:
CRCPD SSR Part V.32
10 CFR Part 37: 37.105

Compatibility = D

Similar language also appears in Part 10, Section 10.5.

1416

1417

1418 22.32.2 Each licensee shall make available to the Department for inspection, upon reasonable
1419 notice, records kept by the licensee pertaining to its receipt, possession, use, acquisition, import,
1420 export, or transfer of category 1 or category 2 quantities of radioactive material.

1421

Part 22, Appendix A - Category 1 and Category 2 Radioactive Materials

Table 1—Category 1 and Category 2 Threshold

The terabecquerel (TBq) values are the regulatory standard. The curie (Ci) values specified are obtained by converting from the TBq value. The curie values are provided for practical usefulness only.

Radioactive material	Category 1 (TBq)	Category 1 (Ci)	Category 2 (TBq)	Category 2 (Ci)
Americium-241.....	60	1,620	0.6	16.2
Americium-241/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 of this Part.

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 must 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 of this Part 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 must be performed in metric values (i.e., TBq) and the numerator and denominator values must be in the same units.

- R₁ = total activity for radionuclide 1
- R₂ = total activity for radionuclide 2
- R_N = total activity for radionuclide n
- AR₁ = activity threshold for radionuclide 1
- AR₂ = activity threshold for radionuclide 2
- AR_N = activity threshold for radionuclide n

$$\sum_1^n \left[\frac{R_1}{AR_1} + \frac{R_2}{AR_2} + \frac{R_n}{AR_n} \right] \geq 1.0$$