

1 **DRAFT 1 02/27/17**

2 **DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT**

3 **Hazardous Materials and Waste Management Division**

4 **RADIATION CONTROL - LICENSING OF RADIOACTIVE MATERIAL**

5 **6 CCR 1007-1 PART 03**

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

7 **Adopted by the Board of Health May 17, 2017; effective July 15, 2017.**

8 _____

9 **Adopted by the Board of Health on December 16, 2015.**

10 **LICENSING OF RADIOACTIVE MATERIAL**

11 * * * = Indicates omission of unaffected rules/rule sections

14 * * *

15 **3.1.4.3** In accordance with Section 24-4-103(12.5)(c), CRS,
16 <https://www.colorado.gov/cdphe/radregs> identifies where incorporated material is
17 available to the public on the internet at no cost. If the incorporated material is not
18 available on the internet at no cost to the public, copies of the incorporated material has
19 been provided to the State Publications Depository and Distribution Center, also known as
20 the State Publications Library. The State Librarian at the State Publication Library retains a
21 copy of the material and will make the copy available to the public.

22 * * *

23 **ADDITIONAL EXEMPTIONS**

24 **3.7 Carriers**

25 Common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service
26 are exempt from the regulations in this Part and Parts 5, 7, 16, 19, and 22 and the requirements
27 for a license set forth in ~~section 81 of the Atomic Energy Act~~ **Section 25-11-103, CRS** to the
28 extent that they transport or store radioactive material in the regular course of carriage for another
29 or storage incident thereto.

31 * * *

Commented [jsj1]: NOTE 1: Stakeholders should be aware that the proposed change affects only one section of the Part 3 rule and that there are gaps in numbering in the draft due to the unaffected sections being excluded. Gaps/excluded sections are denoted by “ * * * ”.

NOTE 2: Side margin comments such as this are for information only to aid the reader in evaluating the proposed changes and are not part of the rule. These side margin notes will be removed prior to final submission to the Colorado Secretary of State for publication in the Colorado Register.

Commented [jsj2]: These dates reflect the anticipated adoption and effective dates and are subject to change.

Adopted and effective dates relocated for consistency with other rules of the Department.

Commented [jsj3]: A new provision is added to provide an online location resource for documents referenced in the rule.

Commented [jsj4]: As written in the current rule, this provision is equivalent to that found in 10 CFR 30.13. However, NRC has identified that Colorado should substitute an equivalent reference in Colorado’s Radiation Control Act (RCA) in lieu of referencing the (federal) Atomic Energy Act. The proposed change addresses this required substitution.

NRC Compatibility “B”
NRC RATS 2013-1
NRC Ltr 08/03/16

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1 **DRAFT 1 02/27/17**

2 **DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT**

3 **Hazardous Materials and Waste Management Division**

4 **RADIATION CONTROL - STANDARDS FOR PROTECTION AGAINST RADIATION**

5 **6 CCR 1007-1 Part 04**

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

7 **Adopted by the Board of Health May 17, 2017; effective date July 15, 2017.**

8 _____

9 ~~**Adopted by the Board of Health June 17, 2015.**~~

10 **PART 4: STANDARDS FOR PROTECTION AGAINST RADIATION**

11 **STANDARDS FOR PROTECTION AGAINST RADIATION**

12 * * * = Indicates omission of unaffected rules/rule sections
13
14

15 * * *

16 **4.1.4.2** In accordance with Section 24-4-103(12.5)(c), CRS,
17 <https://www.colorado.gov/cdphe/radregs> identifies where incorporated material is
18 available to the public on the internet at no cost. If the incorporated material is not
19 available on the internet at no cost to the public, copies of the incorporated material has
20 been provided to the State Publications Depository and Distribution Center, also known as
21 the State Publications Library. The State Librarian at the State Publication Library retains a
22 copy of the material and will make the copy available to the public.

23 * * *

24 **Table 4B3 "Releases to Sewerage"**

25 The monthly average concentrations for release to sanitary sewerage are applicable to the provisions in
26 4.35. The concentration values were derived by taking the most restrictive occupational stochastic oral
27 ingestion ALI and dividing by 7.3 x 10⁶ (ml). The factor of 7.3 x 10⁶ (ml) is composed of a factor of 7.3 x
28 10⁵ (ml), the annual water intake by reference man, and a factor of 10, such that the concentrations, if the
29 sewage released by the licensee were the only source of water ingested by a reference man during a
30 year, would result in a committed effective dose equivalent of 0.5 rem (**5 mSv**).

31 * * *

32 * * *

33

Commented [jsj1]: NOTE 1: Stakeholders should be aware that the proposed changes affect only a few limited sections of the Part 4 rule and that there are gaps in numbering in the draft due to the unaffected sections being excluded. Gaps/excluded sections are denoted by " * * * ".

NOTE 2: Side margin comments such as this are for information only to aid the reader in evaluating the proposed changes and are not part of the rule. These side margin notes will be removed prior to final submission to the Colorado Secretary of State for publication in the Colorado Register.

Commented [jsj2]: These dates reflect the anticipated adoption and effective dates and are subject to change.

Commented [jsj3]: A new provision is added to provide an online location resource for documents referenced in the rule.

Commented [jsj4]: Correction of typographical/formatting errors:
-Correction of spelling "off" to "of";
-Incorporation of international (SI) units of mSv ("millisievert"), consistent with other provisions in Part 4 which typically list both rem and Sv.

PART 4, APPENDIX 4C: QUANTITIES OF LICENSED OR REGISTERED MATERIAL REQUIRING LABELING

QUANTITIES OF LICENSED OR REGISTERED MATERIAL REQUIRING LABELING

* To convert μCi to kBq, multiply the μCi value by 37.

Radionuclide	Abbreviation	Quantity (μCi)
Protactinium-230	Pa-230	0.010.1

Commented [jsj5]:

NOTE: The proposed change to Appendix 4C impacts only the value for Protactinium-230. No other values in Table 4C (before or after Pa-230) are impacted. For brevity of the draft rule, only the impacted table entry is shown rather than the full table.

Commented [jsj6]: During the prior amendment to Part 4 in 2015, NRC provided a table to replace the Appendix 4C in effect at that time using a table equivalent to that found on NRC's website. The value for Pa-230 originally provided by NRC was later found to be incorrect and differed from the "official" value found in the printed version of the Code of Federal Regulations (CFR). The proposed change corrects this error and makes the rule consistent with Appendix C of 10 CFR Part 20.

The proposed change will provide some regulatory relief as the threshold for requiring labeling will be higher by a factor of 10. Protactinium-230 is an uncommon isotope and it is expected that few if any licensees would be impacted by the proposed change.

NRC Compatibility "C"
NRC Ltr 11/18/15

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1 DRAFT 1 02/27/17

2 DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

3 Hazardous Materials and Waste Management Division

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

6 6 CCR 1007-1 Part 22

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

8 Adopted by the Board of Health May 17, 2017; effective date July 15, 2017

10 Adopted by the Board of Health May 15, 2015

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

13 * * * = Indicates omission of unaffected rules/rule sections

15 22.2.2.3 In accordance with Section 24-4-103(12.5)(c), CRS,
16 https://www.colorado.gov/cdphe/radregs identifies where incorporated material is
17 available to the public on the internet at no cost. If the incorporated material is not
18 available on the internet at no cost to the public, copies of the incorporated
19 material has been provided to the State Publications Depository and Distribution
20 Center, also known as the State Publications Library. The State Librarian at the
21 State Publication Library retains a copy of the material and will make the copy
22 available to the public.

24 22.9.7.8 Records.

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

29 22.11.3 Procedures for processing of fingerprint checks.

30 A. For the purpose of complying with this Part, licensees shall submit to the U.S. Nuclear
31 Regulatory Commission, Director, Division of Facilities and Security, 11545 Rockville
32 Pike, Rockville, MD 20852-2738, ATTN: Criminal History Program, Mail Stop ~~T-~~
33 ~~03B46M~~ TWB-05 B32M, one completed, legible standard fingerprint card (Form FD-258,
34 ORIMDNRCOOOZ), electronic fingerprint scan or, where practicable, other fingerprint
35 record for each individual requiring unescorted access to category 1 or category 2
36 quantities of radioactive material. Copies of these forms may be obtained by writing the
37 Office of the Chief Information Officer Information Services, U.S. Nuclear Regulatory
38 Commission, Washington, DC 20555-0001, by calling ~~1-301-415-7543~~ 1-630-829-9565,
39 or by email to FORMS.Resource@nrc.gov. Guidance on submitting electronic fingerprints

Commented [jsj1]:
NOTE 1: Only those radioactive materials licensees possessing an aggregated Category 1 or Category 2 quantity of radioactive material are governed by this rule and the associated proposed changes. Category 1 and Category 2 quantities of radioactive material are specified in the current Part 22 rule which may be found at: <https://www.colorado.gov/cdphe/radregs>
There are no proposed changes to the Category 1 or Category 2 quantities of radioactive material.

NOTE 2: Stakeholders should be aware that the proposed changes affect only a few limited sections of the Part 22 rule and that there are gaps in numbering in this draft due to the unaffected sections being excluded. Gaps/excluded sections are denoted by " * * * ".

NOTE 3: Side margin comments such as this are for information only to aid the reader in evaluating the proposed changes and are not part of the rule. These side margin notes will be removed prior to final submission to the Colorado Secretary of State Office for publication in the Colorado Register.

Commented [jsj2]: These dates reflect the anticipated adoption and effective dates and are subject to change. Adopted and effective dates relocated for consistency.

Commented [jsj3]: A new provision is added to provide an online location resource for documents referenced in the rule.

Commented [jsj4]: The Part 22 rule currently contains two sections which are numbered 22.9.7. Due to the inadvertent duplication in section numbering, this section is renumbered as 22.9.8.

Commented [jsj5]: As a result of an organizational change at the Nuclear Regulatory Commission (NRC) following the publication of Part 22, the reference in Part 22 to the appropriate NRC office and mailing information is updated. Other contact related information is also updated in subsections A, and B (of 22.11.3) for consistency with federal rule.

[Note: While the Radiation Program strives to avoid making references to website URL's (uniform resource locator) phone numbers and other information that may change, Part 22 relies upon a partnership with federal agencies to carry out certain portions of the requirements of the Part 22 rule and therefore reference to federal partner information is required.]

NRC Compatibility "B"
NRC RATS 2015-5
10 CFR 37.27(c)(1)
NRC Ltr 12/27/16

can be found at <http://www.nrc.gov/site-help/e-submittals.htmlsite-help/esubmittals.html>.

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~~ **301-492-3531**.) 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.)

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.

* * *

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

Commented [js]6:

The Part 22 rule was a new regulation initially adopted May 15, 2015. Following issuance of the rule it was determined that a cross-reference error existed in Section 22.16.3.C.1. The current provision in 22.16.3.C.1 references only subsection "A" of 22.16.3 and therefore incorrectly limits the scope of the requirements specific to security refresher training.

Consistent with the equivalent provision (and cross-reference) in 10 CFR 37.43, provision 22.16.3.C.1 should cross reference all of section 22.16.3 for the requirements for security related refresher training. The proposed change corrects this error.

NRC Compatibility "B"
10 CFR 37.43
RATS 2013-1

- 84 4. Relevant results of the licensee's program review and testing and maintenance.
- 85 D. The licensee shall maintain records of the initial and refresher training for 3 years from
- 86 the date of the training. The training records must include dates of the training, topics
- 87 covered, a list of licensee personnel in attendance, and related information.

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* * *

90 **22.23 Reporting of Events.**

91 22.23.1 The licensee shall immediately notify the LLEA after determining that an unauthorized
 92 entry resulted in an actual or attempted theft, sabotage, or diversion of a category 1 or category 2
 93 quantity of radioactive material. As soon as possible after initiating a response, but not at the
 94 expense of causing delay or interfering with the LLEA response to the event, the licensee shall
 95 notify the Department. In no case shall the notification to the Department be later than 4 hours
 96 after the discovery of any attempted or actual theft, sabotage, or diversion.

97 22.23.2 The licensee shall assess any suspicious activity related to possible theft, sabotage, or
 98 diversion of category 1 or category 2 quantities of radioactive material and notify the LLEA as
 99 appropriate. As soon as possible but not later than 4 hours after notifying the LLEA, the licensee
 100 shall notify the Department

101 ~~22.24~~23.3 The initial telephonic notification required by 22.23.1 must be followed within a period of
 102 30 days by a written report submitted to the Department address specified in 22.4. The report
 103 must include sufficient information for Department analysis and evaluation, including identification
 104 of any necessary corrective actions to prevent future instances.

Commented [jsj7]: The proposed change is a technical correction. This section is currently incorrectly numbered as 22.24.3 since it resides in subsection 22.23. The proposed change corrects the numbering error.

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108 **22.27 Advance Notification of Shipment of Category 1 Quantities of Radioactive Material.**

109 22.27.1 As specified in 22.27.1.A. and 22.27.1.B., each licensee shall provide advance
 110 notification to the Department and the governor of a State, or the governor's designee, of the
 111 shipment of licensed material in a category 1 quantity, through or across the boundary of the
 112 State, before the transport, or delivery to a carrier for transport of the licensed material outside
 113 the confines of the licensee's facility or other place of use or storage.

114 A. Procedures for submitting advance notification.

115 1. The notification to the office of each appropriate governor or governor's designee
 116 is available on the NRC's Web site at ~~http://nrc-~~
 117 ~~stp.ornl.gov/special/designee.pdf~~<https://scp.nrc.gov/special/designee.pdf>. A
 118 list of the contact information is also available upon request from the Director,
 119 Division of Material Safety, State, Tribal, and Rulemaking Programs, Office of
 120 Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission,
 121 Washington, DC 20555-0001. The notification to the Department must be made
 122 to the address specified in 22.4.
 123 * * *

Commented [jsj8]: As a result of a change to the Nuclear Regulatory Commission (NRC) website URL following issuance of Part 22, the reference to the NRC website in Part 22 is updated.

 NRC Compatibility "B"
 NRC RATS 2013-1
 10 CFR 37.77(a)(1)
 NRC LTR 11/03/15

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