

**STATEMENT OF BASIS AND PURPOSE  
AND SPECIFIC STATUTORY AUTHORITY**

for Amendments to 6 CCR 1007-1, Part 09, Radiation control -  
Radiation safety requirements for particle accelerators not used in the healing arts

Adopted by the Board of Health October 16, 2024

**Basis and Purpose.**

**Part 9**

Part 9 contains specific requirements applicable to particle accelerators (a type of radiation producing machine) that are not used for healing arts (medical) purposes. Particle accelerators may be used in a variety of industries and fields for different purposes including preparation and manufacturing of microchips, radiation hardening testing on electronics used for space and military applications, devices used for oil and gas exploration, in research, and for production of radioactive materials.

The overall intent of this rule amendment is to make minor editorial and technical corrections, add clarity to existing requirements, update the incorporation by reference section, and improve the consistency between Part 9 and the national model rule Part I of the Conference of Radiation Control Program Directors, (CRCPD) Inc.

**Summary of Part 9 changes by section**

**Changes to the rule header information**

- The rulemaking adoption and effective date is added to the rule, consistent with current practice and other radiation control regulations. This information helps to quickly identify when a given rule became effective.

**Changes to Section 9.1.4.2(2)**

- The rule is amended to correct a cross-reference error. The current rule references Part 20, but due to past rule renumbering, this should instead reference Part 24. Part 24 contains the requirements specific to healing arts (medical) use of particle accelerators. Language is added to clarify that the reference to and requirements of Part 24 are for particle accelerators and not other types of x-ray devices or radiation producing machines;

**Changes to Section 9.1.5**

- Consistent with other recent radiation control rulemakings, standardized language pertaining to published material incorporated by reference is added. Following the request for rulemaking, an incorrect effective date was noted and corrected in 9.1.5.1. The change identifies where documents incorporated by reference can be located in order better meet the intent and requirements of the Colorado Administrative Procedure Act;

**Changes to Section 9.3.2.4**

- To improve clarity and understanding, this section and subsequent sections of the rule are amended to add the word “Part” where the rule makes reference to other radiation regulations;

**Changes to Section 9.3.2.6**

- This section is revised to add clarifying language to require use of written procedures when a radiation safety committee has not been established to approve deviations from standard machine uses. Smaller facilities may not have or be capable of having a

radiation safety committee. The intent of this proposed change is to ensure proper oversight of any unique uses by the facility radiation safety officer;

#### **Changes to Section 9.3.3**

- Language is amended to enhance the clarity of this provision to address particle accelerator facilities where radioactive materials are also in use. This coordination is needed to ensure proper radiation controls are in place to address both radioactive materials and radiation machine (accelerator) hazards and requirements;

#### **Changes to Section 9.5.2**

- Although it is typically standard practice for the radiation safety officer to have stop work authority at facilities using sources of radiation, new provision 9.5.2 is added to strengthen and clarify their authority to terminate operations if necessary to minimize danger and protect public health and safety. The added language is consistent with the CRCPD Part I model rule (1991);

#### **Changes to Section 9.7.5**

- Section 9.7.5 is revised to incorporate additional language from the CRCPD Part I model rule, which is more specific than the current requirement with regard to resetting the accelerator when a safety interlock system has been tripped. Different particle accelerators will have different safety interlocks and designs. The added language is consistent with the CRCPD Part I model rule (1991);

#### **Changes to Section 9.9.3.1**

- Here and in subsequent sections as applicable, the numerical value is added in parenthesis where a numerical value is expressed as a text value; and

#### **Changes to Section 9.10.2**

- Here, the phrase “acceptable to” is replaced by “registered with” as it pertains to Qualified Experts who are involved in performing radiation safety measurements at a particle accelerator facility. The revised language is more consistent with language used in other radiation control regulations.

**Specific Statutory Authority.**

**Statutes that require or authorize rulemaking:**

25-1.5-101(1)(k), 25-1.5-101(1)(l), 25-11-103, 25-11-104, and 25-1-108, C.R.S.

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**Is this rulemaking due to a change in state statute?**

\_\_\_\_\_ Yes, the bill number is \_\_\_\_\_. Rules are \_\_\_\_ authorized \_\_\_\_ required.

XX No

**Does this rulemaking include proposed rule language that incorporate materials by reference?**

XX Yes

XX URL

\_\_\_\_\_ No

**Does this rulemaking include proposed rule language to create or modify fines or fees?**

\_\_\_\_\_ Yes

XX No

**Does the proposed rule language create (or increase) a state mandate on local government?**

XX No.

- The proposed rule does not require a local government to perform or increase a specific activity for which the local government will not be reimbursed;
- The proposed rule requires a local government to perform or increase a specific activity because the local government has opted to perform an activity, or;
- The proposed rule reduces or eliminates a state mandate on local government.

**Has an elected official or other representatives of local governments disagreed with this categorization of the mandate? \_\_\_\_Yes XNo. If “yes,” please explain why there is disagreement in the categorization.**

**Please elaborate as to why a rule that contains a state mandate on local government is necessary.**

For consistency with the model rules and national framework for regulation of sources of radiation, all facilities regardless of ownership, must adhere to the same or equally protective public health and safety requirements and regulations for possession and use of radiation sources in Colorado. The proposed rule changes result in requirements that will equally impact all types of persons who may possess, or operate non-healing arts particle accelerators and facilities whether private, or governmentally owned or operated.