



Dedicated to protecting and improving the health and environment of the people of Colorado

To: Members of the State Board of Health

From: James Jarvis, Hazardous Materials and Waste Management Division
Jennifer Opila, Manager, Colorado Radiation Control Program

Through: Gary Baughman, Director, Hazardous Materials and Waste Management Division *JB*

Date: October 7, 2015

Subject: Request for Rulemaking Hearing
Proposed Amendments to 6 CCR 1007-1, Part 1, General Provisions with a request for the rulemaking hearing to occur in December of 2015

The Division is proposing amendments to regulatory Part 1, titled *General Provisions*. Part 1 is a general rule containing definitions which are used throughout other regulatory parts.

The regulatory part is being amended to ensure consistency with the 2014 and 2015 changes to the Colorado Radiation Control Act (Colorado's the enabling statute). The 2014 changes were initiated by parties external to the Department. Following a 2014 audit of the Radiation Program by the U.S. Nuclear Regulatory Commission (NRC), certain statutory items were found to be incompatible. The Department then initiated changes to the statute which were finalized and approved during the 2015 legislative session. Additional changes to Part 1 are being proposed to address recent NRC comments and to ensure compatibility with federal rule changes.

The proposed changes to Part 1 involve the deletion, modification, and addition of several definitions needed for consistency with the Colorado Radiation Control Act and federal rule.

In mid-July, 2015, approximately 1,100 stakeholders were notified of the proposed rule amendment and were provided the opportunity to comment over a 60 day period. Additionally, three stakeholder meetings were held in August, 2015 in Denver, Montrose, and Canon City, Colorado to present and discuss the proposed changes. The stakeholder comment period remained open through September 16. The Division received written comments from several stakeholders pertaining to the proposed Part 1 definition changes. Stakeholders cited possible conflicts between some definitions or portions of definitions, although no specific suggested changes or recommendations were made. The proposed definition changes are consistent with the same definition in statute or federal rule.

Further details of the proposed changes 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:

<https://www.colorado.gov/pacific/cdphe/regulations-development-parts-1318>

At the October 21, 2015 request for rulemaking, the Radiation Program requests that the Board of Health set a rulemaking hearing for December 16 of 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, Part 1, General Provisions

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(2) of the Act specifies that Colorado's radiation regulations be consistent with U.S. Nuclear Regulatory Commission (NRC) requirements necessary to maintain compatibility (and status as an Agreement State), and 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. Colorado's Part 1 regulation - is based on SSRCR Part "A". With the proposed Part 1 amendments, maintaining exact duplicity with the SSRCR is not feasible and deviation from the SSRCR is necessary. The model regulation - SSRCR Part A - was last amended in 2003 and is not consistent with more recent federal rule changes nor does it contain some definitions specific to state law. The proposed Part 1 amendments modify definitions needed for consistency with federal rule changes and state statute.

The Department is proposing amendments to Part 1 to maintain consistency with the 2014 and 2015 Colorado Radiation Control Act (statutory) changes and to address past comments and federal rule changes of the NRC. The major changes involve the addition, deletion, and modification of several definitions.

The specific proposed amendments to Part 1 involve:

- (1) The deletion of two definitions ("classified material", "non 11e(2) material"), that are not compatible or consistent with state statute or federal rule;
- (2) Modification of five definitions ("byproduct material", "commencement of construction", "NORM", "source material", and "unrefined and unprocessed ore"), that are not compatible or consistent with state statute or federal rule;
- (3) The addition of two definitions ("carrier", "construction") not currently found in the rule but are needed for compatibility and consistency with federal rule; and
- (4) Minor typographical corrections in the rule.

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 numbers are HB 15-1145 and SB 14-192 ;
rules are ___ authorized required.
 No

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

Yes
 No

Does this rule incorporate materials by reference?

Yes
 No

Does this rule create or modify fines or fees?

Yes
 No

DRAFT
REGULATORY ANALYSIS
for Amendments to
6 CCR 1007-1, Part 1, General Provisions

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 Part 1 rule is a general rule containing definitions that are used and implemented through other regulatory parts. Although the definitions of Part 1 are applicable to and may be used in many other regulatory parts, the proposed amendments are more directly associated with uranium and thorium processing facilities and do not apply to persons meeting the exemption provision provided for in Part 3, Section 3.2.1.

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.

The following describes the potential quantitative and qualitative impacts of the proposed amendments.

The definition for “classified material” has been eliminated from the proposed rule, consistent with statutory changes. Although the term (which conflicted with the federal regulatory framework) was eliminated, the statutory requirements associated with this definition in Parts 3 and 18 are retained, consistent with state statute. It is expected that there would be no quantitative impact as a result of removing this definition.

Similarly, the modification of existing definitions and the incorporation of new definitions are intended to add clarity to the rules and their associated regulatory process consistent with the recently revised state law and other amended federal rules. These modifications and additions are not expected to quantitatively impact licensees.

The qualitative impact of the proposed changes will be to bring the definitions contained in the rule in alignment with current state law and federal regulations. This is expected to benefit the Department, regulated community, and stakeholders by ensuring that there is consistency in definitions used and applied within the state and that conflicting definitions are eliminated. The added or clarified language throughout the rule is expected to enhance the understanding of the rule requirements and maintain Colorado’s requirements consistent - notwithstanding differing statutory requirements - with the national regulatory framework for such materials.

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

The rule requirements are enforced only by the Department. No other agency is expected to encounter costs as a result of the proposed changes.

The costs to the Department or state revenues are not expected to change as a result of the proposed changes.

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

There are no anticipated costs as a result of the proposed rule amendments to Part 1.

The benefits of amending the rule will be to address outstanding comments and federal rule changes from the NRC such that the rule is made consistent with the national framework of regulating licensed facilities. The rule amendments will help ensure that Colorado's status as an agreement state is maintained. Additionally, the amended rule will bring the rule requirements into alignment with recent statutory changes.

Inaction on the proposed rule will result in continued or potential future conflict with statutory requirements and may jeopardize Colorado's agreement state status. Inaction would also limit Colorado's consistency within the national regulatory framework for radioactive materials regulation, thus creating potential interstate issues.

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

The purpose of the proposed rule changes is to align the definitions with federal rule and recent statutory changes. There are no less costly or less intrusive methods to achieve the purpose of the proposed changes.

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

The proposed rule amendments are needed to achieve consistency with state statute, and federal rules needed for compatibility as an agreement state. There are no alternate rules or alternatives to rulemaking that will achieve the goals and requirements.

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 short and long term consequences of not implementing the proposed requirements will be inconsistency with state law and continued incompatibility with federal rules and requirements needed to maintain status as an agreement state with NRC. Another potential long term consequence - should the proposed amendments not be addressed under state regulation - is the possibility of enhanced oversight by NRC and potential loss of status as an agreement state. Such oversight could result in additional short term and potential long term expenditures by the state to address program inadequacies.

DRAFT
STAKEHOLDER COMMENTS
for Amendments to
6 CCR 1007-1, Part 1, General Provisions

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

On July 17, 2015, a total of ~1,100+ stakeholders were notified of the opportunity to comment on the proposed draft rule over a 60 day period. The entities notified represented:

- Approximately 550+ Stakeholders who have previously participated in stakeholder processes associated with uranium facilities, and Technologically Enhanced Naturally Occurring Radioactive Material (TENORM) groups;
- Approximately 300+ radioactive materials licensees;
- Approximately 278+ “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. These stakeholder entities include: x-ray registrants, radioactive materials licensees; private citizens; private companies; professional organizations; and special interest groups.

Stakeholder meetings were also held mid-way through the comment period in Denver, Montrose, and Canon City, providing stakeholders the opportunity to ask questions and provide comments on the proposed rule changes. Approximately 30 stakeholders attended the three meetings either in person or via teleconference.

This rulemaking does not include a local government mandate. The burden of regulatory conformity to this rule applies to all applicable regulated entities (licensees). E05 does not apply.

The following individuals and/or entities were notified that this rule-making was proposed for consideration by the Board of Health:

In addition to the notice of opportunity to comment on the proposed rule discussed above, stakeholders were provided with the anticipated rulemaking schedule for both the request for rulemaking and the rulemaking hearing dates. This rulemaking timeline information is also posted on the Department website area specific to the rule changes.

A formal notice of rulemaking will be issued upon initial approval by the Board of Health during a request for rulemaking hearing.

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.

Some stakeholders expressed confusion over a few of the definitions and believe there are conflicts that may arise. The Division disagrees with this assessment. All added or modified definitions are consistent with the same divisions in statute or federal rule.

The table below outlines the specific comments received during the stakeholder response, and the Department’s response to those comments. Due to the parallel rulemaking of this

regulatory part with other regulatory parts, and the overlapping nature of certain proposed provisions or topics, some information may overlap with other rule parts.

The following table is an outline of the comments received during the stakeholder comment period and the response to those comments.

#	Rule Part(s)	Topic	Summary of Comment(s)	Department Response
1A	Parts 1,3,18	Rules deviate from Conference of Radiation Control Program Directors (CRCPD) Suggested State Regulations for Control of Radiation (SSRs)	CDPHE proposes deviation from the model rules but there is no explanation as to what the substantial deviation is for in this rulemaking. A description of what is in the model regulation followed by a description of the deviation is required.	Section 25-11-104 of the Act requires Colorado's radiation regulations to be consistent with U.S. Nuclear Regulatory Commission (NRC) requirements necessary to maintain compatibility (and status as an Agreement State); and 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. In some instances, maintaining consistency with the SSRCR may not be feasible due to the model regulation being out of date with NRC changes, where possible conflicts exist between the SSRCR and state statute, where no model regulation exists, where there are specific programmatic elements or business processes that differ greatly from the SSRCR. The Radiation Control Act (RCA) does not require the Department to indicate each deviation from the SSRCR, however in some cases, where staff has found it would be helpful, notes have been provided in the side margins of the proposed revised regulations.
1B	Basis and Purpose for Part 1	Scope of the Radiation Regulations	A stakeholder representing a wastewater treatment facility commented that the basis and purpose document should specifically state that water treatment plant sludges and biosolids are excluded from ores in the Part 1 definition of "source material".	The Department is proposing only minor changes to "source material" which does not change its meaning. The definition for source material is consistent with federal rule. "Ore", as part of the source material definition, is also defined in Part 1. Sludges and biosolids would not be considered ores by definition as such materials are no longer in its "natural state", a key provision in the definition of "ore". Part 1 is a broad regulatory part containing definitions used in

				<p>many other regulatory parts for many different uses and applications of radioactive materials. Narrowly incorporating language into the supplemental documentation would seemingly necessitate listing many other materials that are also not source material.</p> <p>No change to the proposed rule or supplemental documents was made as a result of this comment.</p>
1C	Part 1	Definitions for NORM, source material, and ore	The definition of "NORM" appears to conflict with the definition of "source material". Ore of 0.05% or more of uranium or thorium cannot be both source material and NORM.	As indicated in Part 1, the term NORM is updated consistent with the RCA. This term is specific to Colorado statute and does not generally appear in NRC regulations (10 CFR). For the purposes of the regulations, uranium ore is source material, not NORM. No change to the proposed rule was made as a result of this comment.
1D	1, 18	<p>Definitions of "source material milling" ^a and "uranium milling" ^b</p> <p>[^a existing Part 1 definition; ^b proposed Part 18 definition]</p>	<p>The definitions in the radiation regulations regarding possession, processing, and disposal of mined uranium ore and its waste are ambiguous, somewhat contradictory both internally as well as with federal law, duplicative, or incomplete.</p> <p>The proposed definition of "uranium milling" (Part 18) is functionally equivalent to the existing definition of "source material milling". If source material milling refers to other activities rather than the processing of uranium and thorium ore source material, this should be clarified.</p> <p>The commenter stated that the NRC general counsel has found the uranium milling definition confusing and that they have proposed an alternative working definition.</p>	<p>The proposed definition (for uranium milling) was requested to be added to Part 18 by NRC as a matter of compatibility and is specific to Part 18 which provides requirements specific to uranium and thorium processing facilities. The regulations of Part 3 - where the term source material milling is used most often - is a more broad regulation encompassing licensing activities that include, but go beyond uranium milling. As the commenter indicated, the definitions are functionally similar. However, NRC has specifically directed Colorado to incorporate the uranium milling definition into its Part 18 rule. The Department agrees that the terms are somewhat redundant, however does not see how this redundancy will hamper implementation. No change to the proposed rule was made as a result of this comment.</p>

1E	1, 18	Definition for “byproduct material”	The language used in the definition of “byproduct material” appears clearly understandable and unambiguous, but it opens many questions as to its meaning.	<p>The definition of byproduct material as used in Part 18 defers to a specific, applicable portion of the definition found in Part 1. The full definition found in Part 1 is based upon the language of state statute and is consistent with the federal rule definition of NRC.</p> <p>The commenter identified further detailed definitional information pertaining to the term “beneficiation” through reference to EPA rule 40 CFR 261.4(b)(7). While this requirement applies under EPA jurisdiction, NRC has not incorporated this definition into its rules.</p> <p>The Department is bound by state law, which includes definitions for “ore” and “byproduct material”, and the requirements, including definitions, of NRC necessary to maintain compatibility. No change to the proposed rule was made as a result of this comment.</p>
1F	1	Definition for “source material”	The definition of source material in Part 1 is confusing. No quantity of ore should be processed without a specific radioactive material license.	The definition of source material and the framework for licensing processing of ore is consistent with the national regulatory framework, NRC regulations and the RCA. No change to the proposed rule was made as a result of this comment.
1G	1	Definition for “facility”	It should be made clear that the license is specific to the physical location of the source material despite any lack of buildings, vehicles or the like.	In practice, the Department considers the licensed location as the location where the licensed activities are being conducted. This approach agrees with the comment. No change to the proposed rule was made as a result of this comment.

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 proposed rule changes are primarily technical in nature and are specific to the requirements of state statute and federal rule. Due to the purpose and structure of the rule containing definitions used throughout other rule parts, there is minimal opportunity for specific accommodations for HEEJ.

1 **DRAFT 1 10/07/15**

2 **DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT**

3 **Hazardous Materials and Waste Management Division**

4 **RADIATION CONTROL - GENERAL PROVISIONS**

5 **6 CCR 1007-1 Part 01**

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

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

9 **PART 1: GENERAL PROVISIONS**

10 **1.1 Purpose and Scope.**

11 1.1.1 Authority.

12 1.1.1.1 Rules and regulations set forth herein are adopted pursuant to the provisions of sections
13 25-1-108, 25-1.5-101(1)(k), 25-1.5-101(1)(l), and 25-11-104, CRS.

14 1.1.2 Basis and Purpose.

15 1.1.2.1 A statement of basis and purpose accompanies this part and changes to this part. A copy
16 may be obtained from the Department.

17 1.1.3 Scope.

18 1.1.3.1 This part includes provisions generally applicable throughout all parts of these radiation
19 control regulations.

20 1.1.4 Applicability

21 1.1.4.1 Except as otherwise specifically provided herein, these regulations apply to all persons
22 who receive, possess, own, acquire, use, process, store, transfer, or dispose any source
23 of radiation.

24 1.1.4.2 Nothing in these regulations shall apply to any person to the extent such person is
25 subject to regulation not relinquished by the U.S. Nuclear Regulatory Commission.¹

26 ¹ Regulation by the State of source material, byproduct material, and special nuclear material in quantities not sufficient to form a
27 critical mass is subject to the provisions of the agreement between the State and the U.S. Nuclear Regulatory Commission and to
28 10 CFR Part 150 (January 1, 2010) of the Commission's regulations.

29 1.1.5 Published Material Incorporated By Reference.

30 1.1.5.1 Published material incorporated in Part 1 by reference is available in accord with Section
31 1.4.

32 **1.2 Definitions.**

33 1.2.1 Definitions of general applicability to the *Rules and Regulations Pertaining to Radiation Control*
34 promulgated by the Department pursuant to provisions of sections 25-1-108, 25-1.5-101(1)(k),
35 25-1.5-101(1)(l), and 25-11-104, CRS, are set forth in section 1.2.2 and shall be liberally
36 construed to protect the public health by controlling excess radiation.

Comment [JJ1]:
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 AMENDMENT DURING THE DRAFT REVIEW PROCESS.

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

EDITORIAL NOTE 2:
IN ORDER TO MAINTAIN AGREEMENT STATE STATUS, COLORADO RULES ARE REQUIRED TO BE COMPATIBLE WITH FEDERAL U.S. NUCLEAR REGULATORY COMMISSION (NRC) REQUIREMENTS.

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

REQUIRED CHANGES TO THE FEDERAL RULES OF NRC ARE CONVEYED TO AGREEMENT STATES THROUGH THE NRC REGULATORY ACTION TRACKING SYSTEM (RATS). UPDATES AND CHANGES TO FEDERAL RULE ARE ISSUED PERIODICALLY AND INFORMATION CAN BE FOUND AT:
http://nrc-stp.ornl.gov/rss_regamendents.html

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

37 1.2.2 As used in these regulations, each term below has the definition set forth. A cross-reference is
38 provided for each common abbreviation. Any additional definition used only in a single part of
39 these regulations is found in that part.

41 [* * * = Indicates omission of unaffected rule sections or definitions.

42 Note – some unchanged definitions are retained in the draft for ease of review of the draft
43 or for cross-reference.]

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46 "Byproduct material" means:

- 47 (1) Any radioactive material, except special nuclear material, yielded in or made
48 radioactive by exposure to the radiation incident to the process of producing or
49 ~~utilizing-using~~ special nuclear material;
- 50 (2) The tailings or wastes produced by the extraction or concentration of uranium or
51 thorium from ore processed primarily for its source material content, including
52 discrete surface wastes resulting from uranium or thorium solution extraction
53 processes (underground ore bodies depleted by these solution extraction
54 operations do not constitute "byproduct material" within this definition);
- 55 (3) ~~(a) Any discrete source of radium-226 material that is~~ produced, extracted, or
56 converted after extraction, ~~before, on, or after August 8, 2005,~~ for use for a
57 commercial, medical, or research activity; ~~or, that:~~
 - 58 ~~(ab) Any material that is a discrete source of radium-226; or~~
 - 59 ~~(bi) Has been made radioactive by use of a particle accelerator; or and~~
 - 60 ~~(ii) Is produced, extracted, or converted after extraction, before, on, or~~
61 ~~after August 8, 2005, for use for a commercial, medical, or research~~
62 ~~activity; and~~
- 63 (4) Any discrete source of naturally occurring radioactive material, other than source
64 material, that:
 - 65 ~~(a) Is extracted, or converted after extraction, for use for a commercial,~~
66 ~~medical, or research activity; and~~
 - 67 ~~(ba) The NRC, in consultation with the administrator of the Environmental~~
68 ~~Protection Agency, the Secretary of Energy, the Secretary of Homeland~~
69 ~~Security, and the head of any other appropriate federal agency,~~
70 ~~determines would is determined by NRC to pose a threat to the public~~
71 ~~health and safety or the common defense and security similar to the~~
72 ~~threat posed by a discrete source of radium-226 to the public health and~~
73 ~~safety; and~~
 - 74 ~~(b) Before, on, or after August 8, 2005, is extracted, or converted after~~
75 ~~extraction, for use for a commercial, medical, or research activity;~~

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77 "Carrier" means a person engaged in the transportation of passengers or property by land
78 or water as a common, contract, or private carrier, or by civil aircraft.

Comment [JJ3]: The definition for "Byproduct material" is updated for consistency with the 2015 Radiation Control Act (RCA) changes (via HB 15-1145). The RCA change is consistent with the same definitions in 10 CFR Part 20, 30, and Part 40.

SSRCR Part A has not been updated to reflect this definition found in current federal rule.

House Bill 15-1145
NRC Compatibility = H&S

Comment [JJ4]: This definition is added consistent with the new (2013) federal rule 10 CFR Part 37 (pertaining to security of high risk materials). The definition here is equivalent to that currently found in Part 17, and Part 22**.

The definition is used in Parts 4, 17, and 22**. Future amendments to Part 17 and 22 will allow removal of the same definition from those parts.

SSRCR Part A has not been updated to reflect this definition found in current federal rule (but is consistent with SSRCR Part T.)

(**Colorado Part 22 has an effective date of July 14, 2015)
Compatibility = [B] [10 CFR 37.5]
NRC RATS 2013-1

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"Classified material" means radioactive materials that are one or more of the following types:

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(1) "Type 2 byproduct material" as byproduct material is defined in 42 U.S.C. sec. 2014 (e) (2);

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(2) Naturally occurring (NORM) or technologically enhanced naturally occurring radioactive material (TENORM);

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(3) Non-11 e (2) material; or

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(4) Ore.

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"Collective dose" means the sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.

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"Commencement of construction" means taking any action defined as "construction" or any other activity at the site of a facility subject to the regulations that has a reasonable nexus to radiologic health and safety, any clearing of land, excavation or other substantial action related to a proposed activity that might adversely affect the natural environment of a site; this term does not include changes desirable for the temporary use of the land for public recreational uses, limited borings to determine site characteristics as necessary for environmental assessment or other pre-construction monitoring to establish background information related to the suitability of a site, or to the protection of environmental values.

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"Construction" means the installation of foundations, or in-place assembly, erection, fabrication, or testing for any structure, system, or component of a facility or activity subject to the regulations in Parts 3, 18, and 19 that are related to radiological safety or security. The term "construction" does not include:

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(1) Changes for temporary use of the land for public recreational purposes;

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(2) Site exploration, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental values;

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(3) Preparation of the site for construction of the facility, including clearing of the site, grading, installation of drainage, erosion and other environmental mitigation measures, and construction of temporary roads and borrow areas;

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(4) Erection of fences and other access control measures that are not related to the safe use of, or security of, radiological materials subject to Parts 3, 18, and 19;

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(5) Excavation;

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(6) Erection of support buildings (e.g., construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings) for use in connection with the construction of the facility;

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(7) Building of service facilities (e.g., paved roads, parking lots, railroad spurs, exterior utility and lighting systems, sanitary sewerage treatment facilities, and transmission lines);

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Comment [JJ5]: Consistent with the 2015 changes to the Colorado Radiation Control Act, the term "Classified material" is deleted.

House Bill 15-1145
Aslo Ref: NRC Ltr 10/24/11
<http://nrc-stp.ornl.gov/special/regs/coregs111024.pdf>

Comment [JJ6]: This definition is updated consistent with a change to federal rule which occurred in 2011. This definition is modified for compatibility with equivalent definitions found in 10 CFR Parts 30.4, 36.2, 40.4, 70.4 and 150.31(b)(3)(iv)(A). (Certain language removed from the current definition is contained within the definition of "construction".)

This definition – used in conjunction with the definition "construction" – clarifies what is and is not considered to be part of the construction process for a facility. The definition applies to those types of sites which typically involve significant amounts of "physical" property and are often built from vacant land.

SSRCR Part A has not been updated to reflect this definition found in current federal rule.

Compatibility = C [40.4; 150.31]; and
= D [30.4; 36.2; 70.4]
NRC RATS 2011-2

Comment [JJ7]:
Consistent with a federal rule change in 2011, this definition is added and is necessary for compatibility with equivalent definitions found in 10 CFR Parts 30.4, 36.2, 40.4, 70.4, and 150.31(b)(3)(iv)(B).

This definition clarifies what is and is not considered construction, for those types of sites which typically involve significant amounts "physical" property and are often built from vacant land. The definition is most often used in conjunction with the definition "commencement of construction".

SSRCR Part A has not been updated to reflect this definition found in current federal rule.

Compatibility = C [40.4; 150.31]; and = D [30.4, 36.2, 70.4]
NRC RATS 2011-2

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(8) Procurement or fabrication of components or portions of the proposed facility occurring at other than the final, in-place location at the facility; or

(9) Taking any other action that has no reasonable nexus to radiological health and safety.

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"NARM". See "naturally occurring or accelerator-produced radioactive material" (NARM).

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"Natural radioactivity" means radioactivity of naturally occurring nuclides.

"Natural thorium" means thorium with the naturally occurring distribution of thorium isotopes (essentially 100 weight percent thorium-232).

"Natural uranium" means uranium containing the naturally occurring distribution of the uranium isotopes 234, 235 and 238 (approximately 0.711 weight percent uranium-235 and the remainder by weight essentially uranium 238) that is neither enriched nor depleted in the isotope uranium 235.

"Naturally occurring or accelerator produced radioactive material"(NARM) means any radioactive material that is not source or special nuclear material or byproduct material types (1) or (2).

"Naturally occurring radioactive material" (NORM) means any nuclide that is radioactive in its natural physical state and is not manufactured. "Naturally occurring radioactive material" does not include source material, special nuclear material, that is not byproduct material, source, or special nuclear material, produced in an accelerator, or by-products of fossil-fuel combustion, including bottom ash, fly ash, and flue-gas emission by-products.

Comment [JJ8]: Consistent with the 2015 changes to the Colorado Radiation Control Act, the definition "Naturally Occurring Radioactive Material (NORM)" is modified.

Definition is specific to Colorado statute.

House Bill 15-1145

* * *

~~"Non-11 e (2) material" means byproduct material that is not type 2 byproduct material or ore. "Non-11 e (2) byproduct material" does not include depleted or enriched uranium as defined by Colorado or federal statute or rule.~~

Comment [JJ9]: Consistent with the elimination of this definition from the 2015 amendment to the Colorado Radiation Control Act, the definition "Non-11 e (2) material" is deleted.

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* * *

"NORM". See "naturally occurring radioactive material" (NORM).

* * *

"Ore" means naturally occurring uranium-bearing, thorium-bearing, or radium-bearing material in its natural form, to be processed for its uranium or thorium content, prior to chemical processing including but not limited to roasting, beneficiating, or refining, and specifically includes material that has been physically processed, such as by crushing, grinding, screening, or sorting.

* * *

"Regulations of the DOT" means the regulations in 49 CFR Parts 100-189 and Parts 390-397 (October 1, 20092014).

Regulations of the NRC" means the regulations in 10 CFR Parts 1-50 and Parts 51-199 (January 1, 20102015).

* * *

163 "Residual radioactivity" means radioactivity in structures, materiel, soils, groundwater, and other
164 media at a site resulting from activities under the licensee's control.

165 (1) This includes radioactivity from all licensed and unlicensed sources used by the
166 licensee, but excludes background radiation.

167 (2) It also includes radioactive materials remaining at the site as a result of routine or
168 accidental releases of radioactive material at the site and previous burials at the
169 site, even if those burials were made in accordance with the provisions of Part 4.

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* * *

172 "Source material" means uranium or thorium, or any combination of uranium or thorium thereof, in
173 any physical or chemical form, including ores that contains, by weight, one-twentieth of 1 percent
174 (0.05 percent) or more, of uranium, thorium or any combination thereof. Source material does not
175 include special nuclear material.

Comment [JJ10]: Consistent with the 2015 changes to the Colorado Radiation Control Act, the definition of "Source material" is modified.

The meaning of this definition is the same as that found in SSRCR Part A.

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176 "Source material milling" means any activity that results in the production of radioactive material
177 that meets byproduct material definition (2).

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* * *

179 "Technologically enhanced naturally occurring radioactive material" (TENORM) means naturally
180 occurring radioactive material whose radionuclide concentrations are increased by or as a result
181 of past or present human practices. "TENORM" does not include:

- 182 (1) Background radiation or the natural radioactivity of rocks or soils;
- 183 (2) "Byproduct material" or "source material", as defined by Colorado statute or rule;
184 or
- 185 (3) Enriched or depleted uranium as defined by Colorado or federal statute or rule.

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* * *

188 "Unrefined and unprocessed ore" means ore in its natural form prior to any processing, such as
189 grinding, roasting, or beneficiating, or refining. Processing does not include sieving or
190 encapsulation of ore or preparation of samples for laboratory analysis.

Comment [JJ11]:
Consistent with the amendments to 10 CFR 40.4 (2013), the definition for "Unrefined and unprocessed ore" is modified.

SSRCR Part A has not been updated to reflect this definition found in current federal rule.

NRC Compatibility = B
NRC RATS = 2013-2

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194 **COMMUNICATIONS AND REFERENCED MATERIALS**

195 **1.3 Communications.**

196 1.3.1 All communications and reports concerning parts of these regulations, and applications filed
197 thereunder, should be addressed to the Department.

198 **1.4 Referenced Materials.**

- 199 1.4.1 Parts of these regulations incorporate by reference (as identified within a particular section)
200 materials originally published elsewhere. These regulations do not include amendments to or
201 editions of incorporated materials published later than the effective date of the particular section.
- 202 1.4.2 Materials incorporated by reference will be available to the public for inspection during regular
203 business hours or for copying at reasonable charge at the offices of the Hazardous Materials and
204 Waste Management Division, Colorado Department of Public Health and Environment, 4300
205 Cherry Creek Drive South, Denver, CO 80246-1530.
- 206 1.4.3 The addresses of the Federal Agencies and Organizations originally issuing the referenced
207 materials are available on the Division website at <http://www.cdphe.state.co.us/hm/index.htm>.
- 208 1.4.4 In accordance with Section 24-4-103(12.5)(c)(ii)(C), CRS, copies of any material that has been
209 incorporated by reference have been provided to the State Publications Depository Library and
210 Distribution Center and are available for interlibrary loan. The incorporated materials may be
211 examined at any state publications depository library.

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215 EDITOR'S NOTES

216 6 CCR 1007-1 has been divided into separate parts for ease of use. Versions prior to 04/01/2007 are
217 located in the first section, 6 CCR 1007-1. Prior versions can be accessed from the All Versions list on the
218 rule's current version page. To view versions effective on or after 04/01/2007, select the desired part of
219 the rule, for example 6 CCR 1007-1 Part 01 or 6 CCR 1007-1 Part 10.

220 History

221 Part 01 entire rule eff. 08/30/2007.

222 Part 01 entire rule eff. 07/01/2010.

223 Part 01, Rules 1.1.4, 1.2 eff. 07/30/2010.

224 Part 01, Rules 1.2, 1.4.2, 1.4.3 eff. 04/30/2011.

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