

1 **DRAFT 1 02/25/2021**

2 **DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT**

3 **Hazardous Materials and Waste Management Division**

4 **RADIATION CONTROL - RADIATION SAFETY REQUIREMENTS FOR WELL LOGGING AND**
5 **SUBSURFACE TRACER STUDIES**

6 **6 CCR 1007-1 Part 16**

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

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9 **Adopted by the Board of Health July 20, 2016 May 19, 2021, effective date July 15, 2021**

10 **PART 16: RADIATION SAFETY REQUIREMENTS FOR WELL LOGGING AND SUBSURFACE**
11 **TRACER STUDIES**

12

13 [* * * DENOTES UNAFFECTED SECTIONS/PROVISIONS IN THE DRAFT RULE]

14 * * *

15 **(16.1.5) Published Material Incorporated by Reference.**

16 ~~Published material incorporated in Part 16 by reference is available in accord with Part 1, Section~~
17 ~~1.4.~~

18 **A. Throughout this Part 16, federal regulations, state regulations, and standards or**
19 **guidelines of outside organizations have been adopted and incorporated by**
20 **reference. Unless a prior version of the incorporated material is otherwise**
21 **specifically indicated, the materials incorporated by reference cited herein include**
22 **only those versions that were in effect as of the most recent effective date of this**
23 **Part 16 (July 2021), and not later amendments or editions of the incorporated**
24 **material.**

25 **B. Materials incorporated by reference are available for public inspection, and copies**
26 **(including certified copies) can be obtained at reasonable cost, during normal**
27 **business hours from the Colorado Department of Public Health and Environment,**
28 **Hazardous Materials and Waste Management Division, 4300 Cherry Creek Drive**
29 **South, Denver, Colorado 80246. Additionally,**
30 **<https://www.colorado.gov/cdphe/radregs> identifies where the incorporated**
31 **materials are available to the public on the internet at no cost. Due to copyright**
32 **restrictions certain materials incorporated in this Part are available for public**
33 **inspection at the state publications depository and distribution center.**

34 **C. Availability from Source Agencies or Organizations.**

35 **1. All federal agency regulations incorporated by reference herein are**
36 **available at no cost in the online edition of the Code of Federal Regulations**
37 **(CFR) hosted by the U.S. Government Printing Office, online at**
38 **www.govinfo.gov.**

Commented [JSJ1]:

Editorial note1: All comments (such as this one) shown in the right side margin of this draft document are for information purposes only to assist the reader in understanding the proposed rule change during the review and comment process.

These side margin notes are not part of the rule and all comments will be deleted prior to publication of the final rule by the Colorado Secretary of State.

Editorial note2: Alignment and formatting corrections and minor typographical adjustments may be made in the rule and may not be specifically identified with a side margin comment.

Editorial note3: Note that this is only a partial rule and only those sections impacted by the proposed changes are included.

Commented [JSJ2]:

Adoption and effective dates are tentative and subject to change, pending Board of Health meeting schedule, final adoption of the rule, and the Colorado Register publication dates.

The annual rulemaking schedule (regulatory agenda) for the Department may be found [online](#).

Commented [JSJ3]:

Language in section 16.1.5, is revised and amended for consistency with the Colorado Administrative Procedure Act (24-4-103(12.5)(a)(2), CRS) regarding documents incorporated by reference, and consistent with other recently amended rules.

- 39 2. All state regulations incorporated by reference herein are available at no
40 cost in the online edition of the Code of Colorado Regulations (CCR)
41 hosted by the Colorado Secretary of State's Office, online at
42 <https://www.sos.state.co.us/CCR/RegisterHome.do>.
- 43 3. Copies of the standards or guidelines of outside organizations are
44 available either at no cost or for purchase from the source organizations
45 listed below.
- 46 a. American National Standards Institute (ANSI)
47 (Formerly the United States of America Standards Institute)
48 1899 L Street, NW
49 11th Floor
50 Washington, DC 20036
51 <https://www.ansi.org/>
52

53
54 * * *

56 16.15.1.1 Has completed training in the subjects outlined in Appendix 16A and
57 demonstrated an understanding thereof;

Commented [JSJ4]: Formatted to remove unneeded spaces/gaps in rule between 16.15.1.1 and 16.15.1.2

- 60 16.15.1.2 Has received copies of and instruction in:
- 61 (1) The regulations contained in the applicable sections of Parts 1, 4, 10 and 16 of
62 these regulations or their equivalent;
- 63 (2) The license or certificate of registration under which the logging supervisor will
64 perform well logging; and
- 65 (3) The licensee's or registrant's operating and emergency procedures required by
66 16.16;

67 * * *

Commented [JSJ5]:
The provisions of 16.17 are revised for consistency with 2020 amendments to U.S. Nuclear Regulatory Commission (NRC) requirements in [10 CFR Part 39.65](#).

68 **16.17 Personnel monitoring.**

69 16.17.1 ~~No licensee or registrant shall permit any individual to act as a logging supervisor or to assist in~~
70 ~~the handling of sources of radiation unless each such individual wears, at all times during the~~
71 ~~handling of such sources, a personnel dosimeter that is processed and evaluated by an~~
72 ~~accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor. The~~
73 ~~licensee or registrant may not permit an individual to act as a logging supervisor or~~
74 ~~logging assistant unless that person wears a personnel dosimeter at all times during the~~
75 ~~handling of licensed radioactive materials or sources of radiation.~~

The NRC amended this federal rule to authorize/allow the use of modern individual monitoring devices in well logging/wireline operations. In the past, NRC has required the use of personnel dosimetry that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor. Some new dosimetry devices do not require the type of processing envisioned in the text of the current rule and may instead be read directly by internet-enabled computers, smartphones, and tablets by the licensee/registrant. The design of these newer devices (rather than the qualifications of the processor) allow for collection of accurate dose information. The proposed rule is rephrased to allow the use of individual monitoring devices that do not require NVLAP processing.

76 16.17.1.1 Each personnel dosimeter ~~shall~~ must be assigned to and worn by only one
77 individual.

78 16.17.1.2 Film badges must be replaced at least monthly **and all other personnel**
79 **dosimeters that require replacement.** ~~Other types of personnel dosimeter~~ must
80 be replaced at least quarterly.

Additionally, since Colorado regulates both radioactive materials and machine generated sources of radiation when used in well logging, references to registrants and sources of radiation are retained in the updated language.

NRC [RATS 2020-1](#)
NRC Compatibility "C"

81 16.17.1.3 ~~After replacement, each personnel dosimeter must be promptly processed.~~ **All**
82 **personnel dosimeters must be evaluated at least quarterly or promptly after**
83 **replacement, whichever is more frequent.**

84 16.17.2 The licensee shall provide bioassay services to individuals using licensed materials in subsurface
85 tracer studies if required by the license.

86 16.17.3 Personnel monitoring records shall be maintained for inspection until the Department authorizes
87 disposition.
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89 * * *

90 [NO FURTHER CHANGES TO THE RULE AFTER THIS POINT]