

1 DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
2 Hazardous Materials and Waste Management Division
3 RADIATION CONTROL - TRANSPORTATION OF RADIOACTIVE MATERIALS

4 6 CCR 1007-1 Part 17

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

7 Adopted by the Board of Health September 20, 2017 August 19, 2020, effective date November 14,
8 2017 October 15, 2020.

9 PART 17: TRANSPORTATION OF RADIOACTIVE MATERIALS

10 GENERAL PROVISIONS

12 [* * * INDICATES NO CHANGES TO THIS PORTION OF THE RULE]

13 * * *

14 17.1.4 Applicability.

15 17.1.4.1 This part applies to any person who transports radioactive material or delivers
16 radioactive material to a carrier for transport.

17 (1) This part applies in particular to any licensee authorized by specific or general
18 license to receive, possess, use, or transfer licensed material, if the licensee
19 delivers that material to a carrier for transport, transports the material outside the
20 site of usage as specified in the license, or transports that material on a public
21 highway.

22 (2) The transport of licensed material or delivery of licensed material to a carrier for
23 transport is subject to the:

24 (a) General provisions of 17.1 through 17.5, including referenced DOT
25 regulations;

26 (b) Quality assurance requirements of 10 CFR Part 71; and

27 (c) Operating controls and procedures requirements of 17.11 through 17.17.

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31 17.1.5 Published Material Incorporated by Reference.

Commented [JSJ1]:

Editorial note 1: All comments (such as this one) shown in the right side margin of this draft document are for information 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.

Editorial note 2: 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 note 3: The acronym "RATS-20##-#" refers to the U.S. Nuclear Regulatory Commission (NRC) regulatory action tracking system. This system is used to identify and summarize changes to federal regulations that may be required for adoption by an NRC agreement state. To maintain agreement state status, Colorado's radiation regulations must be compatible with federal regulations of the NRC.

Colorado statute also prescribes that the radiation control regulations must be consistent with the model regulations of the Conference of Radiation Control Program Directors, Inc. (CRCPD). To date, the CRCPD model regulation equivalent to part 17 has not been updated for consistency with the 2018 federal rule changes.

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These dates reflect anticipated adoption and effective dates based on the current rulemaking schedule. Dates are subject to change pending additional review, approvals, and department rulemaking and Board of Health schedule.

Commented [JSJ3]:

A new provision is added to this section for consistency with the Colorado Administrative Procedure Act (24-4-103(12.5)(a)(2), CRS).

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

38 **The materials incorporated by reference in this Part include only those versions that were**
39 **in effect at the time of the most recent adoption of this Part, and not later amendments to**
40 **the incorporated material, unless a prior version of the incorporated material is otherwise**
41 **specifically noted, and in such case that prior version shall apply.**

42 17.2 Definitions.

43 17.2.1 Definitions of general applicability to these regulations are in Part 1, Section 1.2.2.

44 17.2.2 Terms used in Part 17 have the definitions set forth as follows.

45 "Certificate holder" means a person who has been issued a Certificate of Compliance or other
46 package approval by the NRC.

47 "Certificate of Compliance" (COC) means the certificate issued by the NRC under subpart D of 10
48 CFR **Part 71** which approves the design of a package for the transportation of radioactive
49 material

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52 Criticality Safety Index (CSI)" means the dimensionless number (rounded up to the next tenth)
53 assigned to and placed on the label of a fissile material package, to designate the degree of
54 control of accumulation of packages, overpacks, or freight containers containing fissile material
55 during transportation. Determination of the criticality safety index is described in 10 CFR **Part**
56 **71.22, 71.23, and 71.59.** The criticality safety index for an overpack, freight container,
57 consignment or conveyance containing fissile material packages is the arithmetic sum of the
58 criticality safety indices of all the fissile material packages contained within the overpack, freight
59 container, consignment or conveyance.

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63 "Low specific activity material" (LSA material) means radioactive material with limited specific
64 activity which is nonfissile or is excepted under Part 17 and which satisfies the descriptions and
65 limits set forth in the following section. Shielding materials surrounding the LSA material may not
66 be considered in determining the estimated average specific activity of the package contents. The
67 LSA material must be in one of three groups:

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70 (3) LSA-III. Solids (e.g., consolidated wastes, activated materials), excluding
71 powders, that satisfy the requirements of 10 CFR **Part** 71.77, in which:

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75 "Packaging" means the assembly of components necessary to ensure compliance with the
76 packaging requirements of 10 CFR **Part** 71. It may consist of one or more receptacles, absorbent
77 materials, spacing structures, thermal insulation, radiation shielding, and devices for cooling or
78 absorbing mechanical shocks. The vehicle, tie-down system, and auxiliary equipment may be
79 designated as part of the packaging.

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83 "Regulations of the DOT" means the regulations in 49 CFR Parts 100-189 and Parts 390-397
84 (~~October 1, 2016~~).

85 "Regulations of the NRC" means the regulations in 10 CFR **Part** 71 (~~January 1, 2016~~) for
86 purposes of Part 17.

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90 **LICENSE-RELATED REGULATORY REQUIREMENTS**

91 17.3 Requirement for License.

92 No person shall transport radioactive material or deliver radioactive material to a carrier for
93 transport except as authorized in a general or specific license issued by the Department, an
94 Agreement State, a Licensing State, or NRC, or as exempted in 17.4

95 17.4 Exemptions.

96 17.4.1 Common and contract carriers, freight forwarders, and warehouse workers which are subject to
97 the requirements of the DOT in 49 CFR **Part** 170 through 189, or the U.S. Postal Service in the
98 Postal Service Manual (Domestic Mail Manual), are exempt from the requirements of Part 17 to
99 the extent that they transport or store radioactive material in the regular course of their carriage
100 for others or storage incident thereto. Common and contract carriers who are not subject to the
101 requirements of the DOT or U.S. Postal Service are subject to 17.3 and other applicable
102 requirements of these regulations.

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106 17.4.3 Fissile materials meeting the requirements of one of the paragraphs (a) through (f) in 10 CFR
107 **Part 71.15** are exempt from classification as fissile material, and from the fissile material package
108 standards of 10 CFR **Part 71.55** and 10 CFR **Part 71.59**, but are subject to all other requirements
109 of 10 CFR **Part 71**, except as noted in paragraphs (a) through (f) in 10 CFR **Part 71.15**.

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113 17.7 General License: NRC-Approved Packages.

114 **17.7.1** A general license is hereby issued to any licensee of the Department to transport, or to deliver to
115 a carrier for transport, licensed material in a package for which a license, ~~NRC-issued~~ Certificate
116 of Compliance, or other approval has been issued by the ~~NRC~~ Department.

117 17.7.2 This general license applies only to a licensee who has a quality assurance program approved by
118 ~~the Department~~ NRC as satisfying the provisions of Subpart H (excluding 71.101(c)(2), (d), and
119 (e) and 71.107 through 71.125) of 10 CFR **Part 71**.

120 17.7.3 Each licensee issued a general license under Section 17.7.1 shall:

121 17.7.3.1 Maintain a copy of the ~~NRC-issued~~ Certificate of Compliance, or other approval
122 of the package, and the drawings and other documents referenced in the
123 approval relating to the use and maintenance of the packaging and to the actions
124 to be taken before shipment;

125 17.7.3.2 Comply with the terms and conditions of the license, ~~NRC-issued~~ Certificate of
126 Compliance, or other approval **issued** by the ~~Department~~ NRC, as applicable,
127 and the applicable requirements of Subparts A (excluding 71.11), G (excluding
128 71.85(a)-(c), and 71.91(b)), and H (excluding 71.101(c)(2), (d), and (e) and
129 71.107 through 71.125) of 10 CFR **Part 71**; **and**

130 17.7.3.3 ~~Prior to the licensee's first use of the package, submit to the Department in~~
131 ~~writing: Submit in writing before the first use of the package to: ATTN:~~
132 ~~Document Control Desk, Director, Division of Fuel Management, Office of~~
133 ~~Nuclear Material Safety and Safeguards, using an appropriate method~~
134 ~~listed in 10 CFR Part 71.1(a), the licensee's name and license number and~~
135 ~~the package identification number specified in the package approval.~~

136 ~~(1) The licensee's name and license number; and~~

137 ~~(2) The package identification number specified in the package approval.~~

138 17.7.4 The general license in 17.7.1 applies only when the package approval authorizes use of the
139 package under this general license.

140 17.7.5 For a Type B or fissile material package, the design of which was approved by NRC before April
141 1, 1996, the general license in 17.7.1 is subject to additional restrictions of 10 CFR **Part 71.19**.

142 17.8 General Licenses: Use of Foreign-Approved and Other Approved Packages

Commented [JSJ4]:

Language is updated in 17.7 based on a past NRC comment in correspondence dated March 8, 2018 associated with [RATS 2015-3](#), and changes identified in [RATS 2019-2](#) for consistency with the current [10 CFR Part 71.17](#).

The proposed language clarifies that only NRC issues the Certificate of Compliance document and grants the general license for transportation.

The revised language in 17.7.2 and 17.7.3 also clarifies that prior to the first use of a package, documentation must be submitted to NRC rather than the Department. (See [March 8, 2018](#) letter re rescinding of prior NRC comment).

Provision 17.7 is also formatted for alignment.

NRC Compatibility B.

Commented [JSJ5]:

The text of provisions (1) and (2) are incorporated into 17.7.3.3 above, following the format and flow of the federal rule.

143 17.8.1 A general license is issued to any licensee of the Department to transport, or to deliver to a
144 carrier for transport, licensed material in a package, the design of which has been approved in a
145 foreign national competent authority certificate, that has been revalidated by the DOT as meeting
146 the applicable requirements of 49 CFR **Part** 171.23.

147 17.8.2 Except as otherwise provided in this section, the general license applies only to a licensee who
148 has a quality assurance program approved by the ~~Department~~**NRC** as satisfying the applicable
149 provisions of 10 CFR **Part** 71.101 through 71.137, excluding 71.101(c)(2), (d), and (e) and 71.107
150 through 71.125.

151 17.8.3 This general license applies only to shipments made to or from locations outside the United
152 States.

153 17.8.4 Each licensee issued a general license under Section 17.8.1 shall:

154 (1) Maintain a copy of the applicable certificate, the revalidation, and the drawings
155 and other documents referenced in the certificate, relating to the use and
156 maintenance of the packaging and to the actions to be taken before shipment;
157 and

158 (2) Comply with the terms and conditions of the certificate and revalidation, and with
159 the applicable requirements of Part 17, sections 17.1 through 17.5, 17.10 through
160 17.17, and Subparts A (excluding 71.11), G (excluding 71.85(a)-(c), and
161 71.91(b)), and H (excluding 71.101(c)(2), (d), and (e) and 71.107 through 71.125)
162 of 10 CFR **Part** 71..

163 17.9 General Licenses: Fissile Material Transport

164 17.9.1 A general license is hereby issued to any licensee to transport fissile material, or to deliver fissile
165 material to a carrier for transport, if the licensee meets the requirements of 10 CFR **Part** 71.22
166 and the material is shipped in accordance with 10 CFR **Part** 71.22 and each applicable
167 requirement of Part 17.

168 17.9.2 A general license is hereby issued to any licensee to transport fissile material in the form of
169 plutonium-beryllium (Pu-Be) special form sealed sources, or to deliver fissile material in the form
170 of plutonium-beryllium (Pu-Be) special form sealed sources to a carrier for transport, if the
171 licensee meets the requirements of 10 CFR **Part** 71.23 and the material is shipped in accordance
172 with 10 CFR **Part** 71.23 and each applicable requirement of Part 17.

173 QUALITY ASSURANCE

174 17.10 Quality Assurance Requirements.

175 **17.10.1** Subpart H of 10 CFR **Part** 71 describes quality assurance requirements applying to design,
176 purchase, fabrication, handling, shipping, storing, cleaning, assembly, inspection, testing,
177 operation, maintenance, repair, and modification of components of packaging that are important
178 to safety. As used in Subpart H of 10 CFR **Part** 71, "quality assurance" comprises all those
179 planned and systematic actions necessary to provide adequate confidence that a system or
180 component will perform satisfactorily in service. Quality assurance includes quality control, which
181 comprises those quality assurance actions related to control of the physical characteristics and
182 quality of the material or component to predetermined requirements.

183 **17.10.2** Each licensee is responsible for satisfying the **applicable** quality assurance requirements that
184 apply to its use of a packaging for the shipment of licensed material subject to the applicable

Commented [JSJ6]:
Language is updated in 17.10.1 to address changes described in [RATS 2019-2](#) for consistency with [10 CFR Part 71.101](#) and to address editorial comments in NRC correspondence dated March 8, 2018.

As noted by NRC in [RATS 2019-2](#), the proposed language clarifies that for Colorado licensees (or those working under reciprocity), the Department rather than NRC is to approve the quality assurance plan before the use of packages subject to the requirements of Subpart H of 10 CFR Part 71.

NRC Compatibility C.

Commented [JSJ7]: Provision updated for consistency with 10 CFR Part 71.101(c)(1) per [RATS 2019-2](#). (See agreement state notes associated with this item).

185 requirements ~~of set forth in~~ Subpart H of 10 CFR **Part 71** (excluding **10 CFR** 71.101(c)(2), (d),
186 and (e) and **10 CFR** 71.107 through 71.125).

187 **17.10.3 Before the use of any package for the shipment of licensed material subject to Subpart H**
188 **of 10 CFR Part 71, each licensee shall obtain Department approval of its quality assurance**
189 **program. Each licensee shall file with the Department, a description of its quality**
190 **assurance program, including a discussion of which requirements of Subpart H of 10 CFR**
191 **Part 71 are applicable and how they will be satisfied.**

192 17.10.~~24~~ Radiography containers.

193 A program for transport container inspection and maintenance limited to radiographic exposure
194 devices, source changers, or packages transporting these devices and meeting the requirements
195 of Part 5, sections 5.12~~(4),4~~ through 5.12~~(6),6~~ or equivalent Agreement State or NRC
196 requirement, is deemed to satisfy the requirements of 17.7.2 and 10 CFR **Part** 71.101(b).

197 **17.11** Advance Notification of Shipment of Nuclear Waste.

198 17.11.1 As specified in 17.11.3, 17.11.4, and 17.11.5, each licensee shall provide advance notification to
199 the governor of a state, or the governor's designee, of the shipment of licensed material (nuclear
200 waste), within or across the boundary of the state, before the transport, or delivery to a carrier, for
201 transport, of licensed material outside the confines of the licensee's plant or other place of use or
202 storage.

203 17.11.2 As specified in 17.11.3, 17.11.4, and 17.11.5 of this section, after June 11, 2013, each licensee
204 shall provide advance notification to the Tribal official of participating Tribes referenced in
205 17.11.4.3(3), or the official's designee, of the shipment of licensed material, within or across the
206 boundary of the Tribe's reservation, before the transport, or delivery to a carrier, for transport, of
207 licensed material outside the confines of the licensee's plant or other place of use or storage.

208 17.11.3 Advance notification is also required under this section for the shipment of licensed material,
209 other than irradiated fuel, meeting the following three conditions:

210 17.11.3.1 The licensed material is required by this part to be in Type B packaging for
211 transportation;

212 17.11.3.2 The licensed material is being transported to or across a state boundary en route
213 to a disposal facility or to a collection point for transport to a disposal facility; and

214 17.11.3.3 The quantity of licensed material in a single package exceeds the least of the
215 following:

216 (1) 3000 times the A₁ value of the radionuclides as specified in Appendix 17A, Table
217 A1 for special form radioactive material; or

218 (2) 3000 times the A₂ value of the radionuclides as specified in Appendix 17A, Table
219 A1 for normal form radioactive material; or

220 (3) 1000 TBq (27,000 Ci).

221 17.11.4 Procedures for submitting advance notification

222 17.11.4.1 The notification must be made in writing to:

223 (1) The office of each appropriate governor or governor's designee;

Commented [JSJ8]: Section 17.11 formatted for alignment.

- 224 (2) The office of each appropriate Tribal official or Tribal official's designee;
- 225 (3) The Department.
- 226 17.11.4.2 A notification delivered by mail must be postmarked at least 7 days before the
227 beginning of the 7 day period during which departure of the shipment is
228 estimated to occur.
- 229 17.11.4.3 A notification delivered by any other means than mail must reach the office of the
230 governor or of the governor's designee or the Tribal official, or Tribal official's
231 designee at least 4 days before the beginning of the 7-day period during which
232 departure of the shipment is estimated to occur.
- 233 (1) A list of the names and mailing addresses of the governors' designees receiving
234 advance notification of transportation of nuclear waste was published in the
235 Federal Register on June 30, 1995 (60 FR 34306)
- 236 (2) Contact information for each State, including telephone and mailing addresses of
237 governors and governors' designees, and participating Tribes, including
238 telephone and mailing addresses of Tribal officials and Tribal official's designees,
239 is available on the NRC Web site at: <https://scp.nrc.gov/special/designee.pdf>.
- 240 (3) A list of the names and mailing addresses of the governor's designees and Tribal
241 official's designees of participating Tribes is available on request from the
242 Director, Division of ~~Material Safety, State, Tribal, and Rulemaking~~ **Materials**
243 **Safety, Security, State, and Tribal** Programs, Office of Nuclear Material Safety
244 and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-
245 0001.
- 246 17.11.4.4 The licensee shall retain a copy of the notification as a record for 3 years.
- 247 17.11.5 Information to be furnished in advance notification of shipment.
- 248 17.11.5.1 Each advance notification of nuclear waste shall contain the following
249 information:
- 250 (1) The name, address, and telephone number of the shipper, carrier, and receiver
251 of the nuclear waste shipment;
- 252 (2) A description of the nuclear waste contained in the shipment, as required by 49
253 CFR **Part** 172.202 and 172.203(d);
- 254 (3) The point of origin of the shipment and the 7-day period during which departure
255 of the shipment is estimated to occur;
- 256 (4) The 7-day period during which arrival of the shipment at state boundaries or
257 Tribal reservation boundaries is estimated to occur;
- 258 (5) The destination of the shipment, and the 7-day period during which arrival of the
259 shipment is estimated to occur; and
- 260 (6) A point of contact with a telephone number for current shipment information.
- 261 17.11.6 Revision notice

Commented [JSJ9]: Due to an NRC organizational change, the Division title is modified here, consistent with the 2018 changes to [10 CFR 71.97\(c\)\(3\)\(iii\)](#).

NRC Compatibility B
NRC [RATS 2018-3](#)

262 17.11.6.1 A licensee who finds that schedule information previously furnished to a governor
263 or governor's designee or a Tribal official or Tribal official's designee, in
264 accordance with this section, will not be met, shall:

265 (1) Telephone a responsible individual in the office of the governor of the state or of
266 the governor's designee or the Tribal official or Tribal official's designee an inform
267 that individual of the extent of the delay beyond the schedule originally reported;
268 and

269 (2) Maintain a record of the name of the individual contacted for 3 years.

270 17.11.7 Cancellation notice

271 17.11.7.1 Each licensee who cancels a nuclear waste shipment, for which advance
272 notification has been sent, shall:

273 (1) Send a cancellation notice to the governor of each state, or governor's designee
274 previously notified, each Tribal official or Tribal official's designee previously
275 notified and to the Department;

276 (2) State in the notice that it is a cancellation and identify the advance notification
277 that is being cancelled; and

278 (3) Retain a copy of the notice for 3 years.

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282 17.14 Preliminary Determinations.

283 Before the first use of any packaging for the shipment of radioactive material the licensee shall ascertain
284 that the determinations in paragraphs (a) through (c) of 10 CFR Part 71.85 have been made by the
285 certificate holder.

286 17.15 Routine Determinations.

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288 * * *

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290 17.15.7 Any structural part of the package which could be used to lift or tie down the package during
291 transport is rendered inoperable for the purpose unless it satisfies design requirements specified
292 in 10 CFR Part 71.45;

293 17.15.8 The level of non-fixed (removable) radioactive contamination on the external surfaces of each
294 package offered for shipment is as low as reasonably achievable and within the limits specified in
295 49 CFR Part 173.443.

296 17.15.8.1 Determination of the level of non-fixed (removable) contamination shall be based
297 upon wiping an area of 300 square centimeters of the surface concerned with an

298		absorbent material, using moderate pressure, and measuring the activity on the wiping
299		material.
300	(1)	The number and location of measurements shall be sufficient to yield a
301		representative assessment of the removable contamination levels.
302	(2)	Other methods of assessment of equal or greater detection efficiency may be
303		used.
304	17.15.8.2	In the case of packages transported as exclusive use shipments by rail or
305		highway only, the non-fixed (removable) radioactive contamination:
306	(1)	At the beginning of transport shall not exceed the levels specified in 49 CFR Part
307		173.443; and
308	(2)	At any time during transport shall not exceed 10 times the levels specified in 49
309		CFR Part 173.443.
310	17.15.9	External radiation levels around the package and around the vehicle, if applicable, shall not
311		exceed:
312	17.15.9.1	2 mSv/h (200 millirem per hour) at any point on the external surface of the
313		package at any time during transportation;
314	17.15.9.2	A transport index of 10.0.
315	17.15.10	For a package transported in exclusive use by rail, highway or water, radiation levels
316		external to the package may exceed the limits specified in 17.15.9 but shall not exceed
317		any of the following:
318	17.15.10.1	2 mSv/h (200 millirem per hour) on the accessible external surface of the
319		package unless the following conditions are met, in which case the limit is 10
320		mSv/h (1000 millirem per hour);
321	(1)	The shipment is made in a closed transport vehicle,
322	(2)	Provisions are made to secure the package so that its position within the vehicle
323		remains fixed during transportation, and
324	(3)	No loading or unloading operation occurs between the beginning and end of the
325		transportation.
326	17.15.10.2	2 mSv/h (200 millirem per hour) at any point on the outer surface of the vehicle,
327		including the upper and lower surfaces, or, in the case of a flat-bed style vehicle,
328		with a personnel barrier, at any point on the vertical planes projected from the
329		outer edges of the vehicle, on the upper surface of the load (or enclosure, if
330		used), and on the lower external surface of the vehicle;
331	(1)	A flat bed style vehicle with a personnel barrier shall have radiation levels
332		determined at vertical planes.
333	(2)	If no personnel barrier is in place, the package cannot exceed 2 mSv/h (200
334		millirem per hour) at any accessible surface.

Commented [JSJ10]:
Sections 17.15.9 through 7.15.15 are formatted for alignment of text.

- 335 17.15.10.3 0.1 mSv/h (10 millirem per hour) at any point 2 meters from the vertical planes
336 represented by the outer lateral surfaces of the vehicle, or, in the case of a flat-
337 bed style vehicle, at any point 2 meters from the vertical planes projected from
338 the outer edges of the vehicle; and
- 339 17.15.10.4 0.02 mSv/h (2 millirem per hour) in any normally occupied positions of the
340 vehicle, except that this provision does not apply to private motor carriers when
341 persons occupying these positions are provided with special health supervision,
342 personnel radiation exposure monitoring devices, and training in accordance with
343 10.3; and
- 344 17.15.11 For shipments made under the provisions of Section 17.15.10, the shipper shall provide
345 specific written instructions to the carrier for maintenance of the exclusive use shipment
346 controls. The instructions must be included with the shipping paper information.
- 347 17.15.12 The written instructions required for exclusive use shipments must be sufficient so that,
348 when followed, they will cause the carrier to avoid actions that will:
- 349 17.15.12.1 Unnecessarily delay delivery; or
- 350 17.15.12.2 Unnecessarily result in increased radiation levels or radiation exposures to
351 transport workers or members of the general public.
- 352 17.15.13 A package must be prepared for transport so that in still air at 100 degrees Fahrenheit
353 (38 degrees Celsius) and in the shade, no accessible surface of a package would have a
354 temperature exceeding 50 degrees Celsius (122 degrees Fahrenheit) in a nonexclusive
355 use shipment or 82 degrees Celsius (185 degrees Fahrenheit) in an exclusive use
356 shipment. Accessible package surface temperatures shall not exceed these limits at any
357 time during transportation.
- 358 17.15.14 A package may not incorporate a feature intended to allow continuous venting during
359 transport.
- 360 17.15.15 Before delivery of a package to a carrier for transport, the licensee shall ensure that any
361 special instructions needed to safely open the package have been sent to the consignee,
362 or otherwise made available to the consignee, for the consignee's use in accordance with
363 4.32.5.2.
- 364
- 365 * * *
- 366
- 367 17.17.1.4 Type and quantity of licensed material in each package, and the total quantity of
368 each shipment;
- 369 * * *
- 370 17.17.1.10 Results of the determinations required by 17.15 and by the conditions of the
371 package approval.
- 372
- 373 * * *

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374 **Appendix 17A - Determination of A1 and A2**

375 17A1 Values of A₁ and A₂ for individual radionuclides, which are the bases for many activity limits
376 elsewhere in these regulations are given in Table 17A1. The curie (Ci) values specified are
377 obtained by converting from the Terabecquerel (TBq) value. The Terabecquerel values are the
378 regulatory standard. The curie values are for information only and are not intended to be the
379 regulatory standard. Where values of A₁ or A₂ are unlimited, it is for radiation control purposes
380 only. For nuclear criticality safety, some materials are subject to controls placed on fissile
381 material.

382 17A2 For individual radionuclides whose identities are known, but which are:

383 17A2.1 Not listed in Table 17A1:

- 384 (1) The A₁ and A₂ values Table 17A3 may be used.
- 385 (2) Otherwise, the licensee shall obtain prior NRC approval of the A₁ and A₂ values
386 for radionuclides not listed in Table 17A1, before shipping the material. The
387 licensee shall submit such request for prior approval to NRC in accordance with
388 10 CFR **Part** 71.1.

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392 [NO CHANGES TO REMAINDER OF RULE OR SUBSEQUENT TABLES]

Commented [JSJ13]: Prior to final publication, ensure that Appendix 7A begins on a new page.