

**3701:1-50-17      Routine determinations.**

Before each shipment of licensed material, the licensee shall ensure that the package with its contents satisfies the applicable requirements of this chapter and of the license. The licensee shall determine that:

- (A) The package is proper for the contents to be shipped;
- (B) The package is in unimpaired physical condition except for superficial defects such as marks or dents;
- (C) Each closure device of the packaging, including any required gasket, is properly installed and secured and free of defects;
- (D) Any system for containing liquid is adequately sealed and has adequate space or other specified provision for expansion of the liquid;
- (E) Any pressure relief device is operable and set in accordance with written procedures;
- (F) The package has been loaded and closed in accordance with written procedures;
- (G) For fissile material, any moderator or neutron absorber, if required, is present and in proper condition;
- (H) Any structural part of the package that could be used to lift or tie down the package during transport is rendered inoperable for that purpose, unless it satisfies the design requirements of 10 C.F.R. 71.45 (as published in the January 1, 2014 Code of Federal Regulations).
- (I) The level of non-fixed or removable radioactive contamination on the external surfaces of each package offered for shipment is as low as reasonably achievable and within the limits as specified in DOT regulations in 49 C.F.R. 173.443 (as published in the January 1, 2014 Code of Federal Regulations).
- (J) External radiation levels around the package, and around the vehicle if applicable, will not exceed the limits specified in this paragraph at any time during transportation:
  - (1) Except as provided in paragraph (J)(2) of this rule, each package of radioactive materials offered for transportation must be designed and prepared for shipment so that under conditions normally incident to transportation the radiation level does not exceed two millisievert per hour (two hundred millirem per hour) at any point on the external surface of the package, and the transport index does not exceed ten;
  - (2) A package that exceeds the radiation level limits specified in paragraph (J)(1) of this rule must be transported by exclusive use shipment only, and the radiation levels for such shipment must not exceed the following during transportation:
    - (a) Two millisievert per hour (two hundred millirem per hour) on the external surface of the package, unless the following conditions are met, in which case the limit is ten millisievert per hour (one thousand millirem per hour):

- (i) The shipment is made in a closed transport vehicle;
  - (ii) The package is secured within the vehicle so that its position remains fixed during transportation; and
  - (iii) There are no loading or unloading operations between the beginning and end of the transportation;
- (b) Two millisievert per hour (two hundred millirem per hour) at any point on the outer surface of the vehicle, including the top and underside of the vehicle; or in the case of a flat-bed style vehicle, at any point on the vertical planes projected from the outer edges of the vehicle, on the upper surface of the load or enclosure, if used, and on the lower external surface of the vehicle; and
- (c) 0.1 millisievert per hour (ten millirem per hour) at any point two meters (6.6 feet) from the outer lateral surfaces of the vehicle (excluding the top and underside of the vehicle); or in the case of a flat-bed style vehicle, at any point two meters (6.6 feet) from the vertical planes projected by the outer edges of the vehicle (excluding the top and underside of the vehicle); and
- (d) 0.02 millisievert per hour (two millirem per hour) in any normally occupied space, except that this provision does not apply to private carriers, if exposed personnel under their control wear radiation dosimetry devices in conformance with rule 3701:1-38-14 of the Administrative Code.
- (3) For shipments made under the provisions of paragraph (J)(2) of this rule, the shipper shall provide specific written instructions to the carrier for maintenance of the exclusive use shipment controls. The instructions must be included with the shipping paper information.
- (4) The written instructions required for exclusive use shipments must be sufficient so that, when followed, they will cause the carrier to avoid actions that will unnecessarily delay delivery or unnecessarily result in increased radiation levels or radiation exposures to transport workers or members of the general public; and
- (K) Accessible package surface temperatures will not exceed the limits specified in 10 C.F.R. 71.43(g) (as published in the January 1, 2014 Code of Federal Regulations) at any time during transportation.

Replaces: 3701:1-50-17

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CERTIFIED ELECTRONICALLY

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Certification

02/08/2016

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Date

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