



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

MAY -7 2008

Mr. Boyd Imai
Utah Division of Radiation Control
168 North 1950 West
Salt Lake City, UT 84116

Ref. No.: 08-0012

Dear Mr. Imai:

This is in response to your January 3, 2008 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to Class 7 (radioactive) materials. Specifically, you ask several questions concerning the requirements for a closed transport vehicle used solely for the transport of radioactive materials in accordance with § 173.443(d). Your questions are paraphrased and answered below:

Q1. Is an empty transport vehicle used in accordance with § 173.443(d) subject to the HMR?

A1. To determine the applicability of the HMR to an empty transport vehicle with a radioactive substance distributed on its surface, it must first be determined whether the total activity present exceeds the activity limit for an exempt consignment, as listed in § 173.436 or calculated in accordance with § 173.433. If the total activity is greater than the activity limit for an exempt consignment, the empty transport vehicle would be subject to the HMR as a Class 7 hazard; otherwise it would not.

Q2. Would DOT assume an empty transport vehicle used in accordance with § 173.443(d), is subject to the HMR?

A2. See A1.

Q3. How can a shipper demonstrate an empty transport vehicle used in accordance with § 173.443(d), does not meet the definition of a Class 7 (radioactive) material?

A3. Measurements performed with an appropriate instrument in conjunction with calculations or reasoned evaluation, using reliable and conservative procedures and parameters may be used to determine the level of radioactive substances distributed on the transport vehicle.

Q4. If the transport vehicle is subject to the HMR, what proper shipping name should be used?


A4. Under § 173.22, it is the shipper's responsibility to properly class and describe a hazardous material.

Q5. If no measurement of residual radioactive material remaining in an empty transport vehicle subject to § 173.443(d) is taken and the transport vehicle is subject to the shipping paper requirements, what activities can be assigned in order to comply with § 172.203(d)?

A5. The shipper must determine how much activity, and of which radionuclides are present, based on calculations or reasoned evaluation, using reliable and conservative procedures and parameters before completing a shipping paper. Situations may exist when these methods are not sufficient and physical measurements must be performed.

I hope this information is helpful. Please contact us if you require additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles E. Betts". The signature is written in a cursive style with a large, prominent initial "C".

Charles E. Betts
Senior Transportation Regulations Specialist
Office Hazardous Materials Standards

Leary
 § 173.403
 § 173.443(d)
 RAM - Definitions
 08-0012

Drakeford, Carolyn <PHMSA>

From: INFOCNTR <PHMSA>
Sent: Friday, January 04, 2008 11:04 AM
To: Drakeford, Carolyn <PHMSA>
Subject: FW: 49 CFR 173.443(d) Interpretation

Carolyn, please make this an Interp letter request, thanks!

From: Mark Ledoux [mailto:mledoux@energysolutions.com]
Sent: Thursday, January 03, 2008 1:04 PM
To: Boyd Imai; INFOCNTR <PHMSA>
Cc: John Hultquist; Tye Rogers; Allan Erichsen; Jeff Gardner
Subject: RE: 49 CFR 173.443(d) Interpretation

-----Original Message-----

From: Boyd Imai [mailto:bimai@utah.gov]
Sent: Thursday, January 03, 2008 10:35 AM
To: infocntr@dot.gov
Cc: Mark Ledoux; John Hultquist
Subject: 49 CFR 173.443(d) Interpretation

In accordance with 49 CFR 105.20(a)(2) the State of Utah, Division of Radiation Control (DRC) requests that several issues regarding the application of 49 CFR 173.443(d) provisions be interpreted.

49 CFR 173.443(d) states:

Paragraphs (b) and (c) of this section do not apply to any closed transport vehicle used solely for the transportation by highway or rail of Class 7 (radioactive) material packages with contamination levels that do not exceed 10 times the levels prescribed in paragraph (a) of this section if-

- (1) A survey of the interior surfaces of the empty vehicle shows that the radiation dose rate at any point does not exceed 0.12 mSv per hour (10 mrem per hour) at the surface or 0.02 mSv per hour (2 mrem per hour) at 1 m (3.3 feet) from the surface;
- (2) Each vehicle is stenciled with the words "For Radioactive Materials Use Only" in letters at least 76 millimeters (3 inches) high in a conspicuous place on both sides of the exterior of the vehicle; and
- (3) Each vehicle is kept closed except for loading or unloading.

With respect to this provision please address the following questions:

- 1) When shipping the empty closed transport vehicle is the shipment excepted from 49 CFR Part 172 requirements (all or in part)?
- 2) Is there any DOT assumption that the empty closed transport vehicle and/or the residues contained within are not Radioactive Material as defined in 49 CFR 173.403?

1/4/2008

3) How can a shipper demonstrate that the empty transport vehicle and/or residues do not meet the definition of a Class 7, radioactive material?

4) If 49 CFR 172 Subpart C shipping papers are required, what proper shipping name should be used?

Can/should the shipper designate the proper shipping name that was used to describe the initial shipment of Class 7 material (the material transported by the conveyance before it was emptied)? Can/should provisions in 172.203(e) be applied? Or is there a more preferred proper shipping name for this shipment, e.g. Radioactive Material, Surface Contaminated Object?

5) Assuming no assay of any residual material is performed and no measurement is taken of the amount of material left in the conveyance after being emptied, and if the shipment of an empty "For Radioactive Materials Use Only" conveyance is not excepted from shipping paper requirements, e.g. a limited quantity of radioactive material, what activities can be assigned in order to comply with 49 CFR 172.203(d)(3)?

The DRC has immediate concerns in this regard and respectfully requests a response as soon as possible.

For your convenience, a copy of this request is attached as a MS Word document. If you have any questions about this request please contact me. Thank you very much.

Boyd Imai
Utah Division of Radiation Control
168 North 1950 West
Salt Lake City, UT 84116
Division Phone No.: (801) 536-4250
Direct Phone Line: (801) 536-0038
Fax: (801) 533-4097