



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

JAN 6 2000

Ref. No. 99-0207

Mr. Len Warbiany
Customer Service Manager
ADCO Services, Inc.
17650 Duvan Drive
Tinley Park, Illinois 60477

Dear Mr. Warbiany:

This is in response to your letter dated July 23, 1999, requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) as they relate to the transportation of radioactive materials under exclusive use. Your specific questions are paraphrased and answered below.

- Q1. If a shipment of Radioactive material is shipped under "Exclusive use" and the consignor or consignee authorizes the carrier, with radiological training, to do intermediate loading and unloading of other waste or general commodities according to the exclusive use instructions, is this permissible under §§ 173.403, 173.427, 173.447, 173.448 and 177.842?
- A1. The answer is yes. Section 173.403 defines "Exclusive use" to mean "sole use by a single consignor of a conveyance for which all initial, intermediate, and final loading and unloading are carried out in accordance with the direction of the consignor or consignee. . . ." Since there is no express prohibition of intermediate loading or unloading of other hazardous or non-hazardous material, such intermediate loading or unloading is permitted if performed in accordance with the direction of the (single) consignor or consignee, and conforms to all applicable HMR requirements and those of other cognizant agencies are met. For example, additional restrictions apply if some or all of the radioactive material is also fissile.

Note that in the case of LSA or SCO being shipped under the exclusive use provisions of § 173.427, all loading must be done by the consignor and unloading by the consignee in accordance with § 173.427(a)(6)(i), and the instructions to the carrier must come from the consignor in accordance with § 173.427(a)(6)(iv).

- Q2. If a package of Radioactive material exceeds the limits specified in § 173.441(a), can there still be intermediate loading and unloading of the shipment if the carrier is under a state or Federally regulated "Radiation Protection Program" and are under a "Radiation Dosimetry Program" and have radiological training?



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173.441

- A2. The answer could be yes or no depending on the circumstances. If either the radiation level at the surface of an undamaged package is over 2 mSv/hour or the transport index (TI) is greater than 10, or both, the package and shipment must satisfy the requirements of § 173.441(b), (c) and (d). Section 173.441(b)(1)(iii) states that if the radiation level at the surface of the package is greater than 2 mSv/hour, then intermediate loading and unloading is not permitted.

On the other hand, if the TI is greater than 10 but the surface radiation level is not greater than 2 mSv/hour, loading and unloading is permitted if performed in conformance with the direction of the consignor or the consignee and in conformance with other restrictions and conditions of § 173.441(b), (c) and (d).

- Q3 If a package cannot meet the contamination limits specified in Table 11 of § 173.443, and is less than 10 times the limit in Table 11, may it still be shipped under "Exclusive use" in a closed transport vehicle by highway in domestic transportation?

- A3. The answer is yes, provided the condition prescribed in § 173.443(d) are met. For packages carried in a closed highway vehicle or rail car used solely for the transportation of radioactive material packages, § 173.443(d) allows the amount of surface contamination on the packages to be as high as 40 or 4.0 Bq/cm², respectively, provided the conditions of that paragraph are satisfied. These conditions include a requirement that the vehicle be stenciled on both sides with the words "For Radioactive Materials Use Only," in letters at least 76 mm high in a conspicuous place.

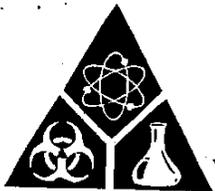
Note that for packages transported as exclusive use shipments by rail or public highway, § 173.443(b) allows package surface contamination levels as high as 10 times the package surface limits identified in Table 11 (which are 4.0 Bq/cm² and 0.4 Bq/cm², respectively; the Table 11 values of 0.4 and 0.04 Bq/cm² are the wipe limits, assuming 10% efficiency), so long as the levels at the beginning of transport do not exceed the values of 4.0 and 0.4 Bq/cm², respectively, identified by Table 11. This provision accommodates "weeping" or other processes that increase contamination on the surface of the package while it is in transit.

I hope this information is helpful. Should you have further questions, please contact us.

Sincerely,



Hattie L. Mitchell, Chief
Regulatory Review and Reinvention
Office of Hazardous Materials Standards



ADCO

Services, Inc.

Betts
173.441

July 23, 1999

U. S. Department of Transportation RSPA
Office of Hazardous Standards
Mr. Edward Mazzullo, Director
DHM-10
400 7th Street S.W.
Washington, D.C. 20590

Dear Mr. Mazzullo,

I am writing this letter to get an official interpretation of the regulations surrounding transporting radioactive materials as Exclusive Use. We have had several discussions within our company and it seems each of us understands the regulations just slightly differently. We would appreciate an official written response to the following questions.

#1. If a shipment of "Radioactive Material" is shipped under "Exclusive Use" and the consignor or consignee authorizes the carrier, with radiological training, to do intermediate loading and unloading of other waste and/or general commodities, according to the exclusive use instructions, is this within the regulations under: 173.403, 173.427, 173.447, 173.448 and 177.842?

#2. If a package of "Radioactive Material" exceeds the limits specified in 173.441(a), can there still be intermediate loading and unloading of the shipment if the carrier is under a state or federally regulated "Radiation Protection Program" and are under a "Radiation Dosimetry Program" and have radiological training?

#3. If a package cannot meet the contamination limits specified in Table 11 of 173.443, and is less than 10 times the limit in Table 11, can it still be shipped under "Exclusive Use" in a closed transport vehicle by highway in domestic transportation?

Thank you in advance for your response. If you should have any questions, please feel free to contact me. If you prefer, you can fax your response to me at 708-429-9759.

Sincerely,

Len Warbiany
Customer Service Manager