



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

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

FEB - 2 2001

Mr. Phani Raj  
President  
Technology and Management Systems, Inc.  
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99 South Bedford Street  
Burlington, Massachusetts 01803

Ref. No. 00-0278

Dear Mr. Raj:

This responds to your letter, dated September 27, 2000, concerning provisions in the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the rail transportation of hazardous materials. Your specific questions are paraphrased and answered below.

- Q1. The table in § 171.7 lists material incorporated by reference into the HMR. Do all materials in the referenced sources become HMR requirements or only those sections of the referenced sources specifically identified in sections of the HMR?
- A1. The standards and other material listed as matter incorporated by reference in § 171.7 are incorporated into the HMR in their entirety. If only a part of an industry or international standard is incorporated into the HMR, the table entry specifies the section or sections of the standard. Thus, the table lists the separate sections of the Association of American Railroads (AAR) Manual of Standards and Recommended Practices that are incorporated by reference in the HMR. Sections not specifically listed are not incorporated by reference.
- Q2. If the HMR refer to particular requirements in a referenced source and the referenced source further references a secondary source, do the pertinent sections of the secondary source automatically become part of the HMR requirements?
- A2. No. Material specifically listed in the table in § 171.7 is incorporated by reference into the HMR. However, secondary sources referred to in the incorporated reference, such as the ASME Code, ASTM Standards, or the AAR Standards, are not thereby incorporated by reference. (Note that such secondary sources may separately and directly be incorporated by reference elsewhere in the HMR.) In the example you provide in your letter, Rule 70 of the AAR Field Manual is referenced in Appendix C of the Tank Car Manual; however, its marking requirements are not incorporated by reference into the HMR.



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Q3. What is the purpose of the requirement in § 179.22 that all tank cars be stenciled? May a tank car be loaded with a hazardous material in an amount that exceeds the amount specified on a stencil so long as the HMR provisions concerning outage and filling limits are met?

A3. Section 179.22 requires tank cars to be “marked” according to the requirements in Appendix C of the AAR Specifications for tank cars. A marking is a descriptive name, identification number, instructions, cautions, weight, specification, or UN marks, or a combination thereof required by the HMR. The purpose of referencing Appendix C of the AAR Tank Car Manual is to ensure that all markings required by the HMR are placed in a location on the tank that is consistent with all other tank cars in transport. Having markings in the same location on each tank car makes consistent the identification of the tank by railroad and emergency response personnel alike.

For tank cars, marking is accomplished by stenciling (applied with paint or decal) and stamping. Marking requirements depend on the applicable tank car specification. Generally, a tank car must be stamped on both outside heads with the specification number to which the tank was built, which must also include the material of construction, cladding material (if any used), tank builder’s initials, date of original test, car assemblers initials (if other than tank builder), and water capacity. In addition, a tank car must be stenciled on its side with the tank car specification number, water capacity, test dates, reporting mark, load limit, and other information relevant to the particular specification or the commodity to be transported.

Tank car outage and filling limits for specific commodities are addressed in several different places in the HMR. For example, § 173.24b(a) prescribes general outage and filling limits for liquids and liquefied gases. In addition, § 173.314 specifies outage and filling limits for compressed gases in tank cars.

Section 173.24b(d)(2) states that, unless otherwise provided in the HMR, a tank car may not be loaded with a hazardous material that exceeds the maximum weight of lading marked on the specification plate. For a tank car, the “specification plate” means the information stamped on its outside heads. This marking does not include load limits, because that is generally a function of the carrying capacity of the underframe, trucks, and axle loadings. Thus, federal rules prohibit new construction of cars having a gross weight on rail that exceeds 263,000 pounds or greater than 34,500 gallon capacity. The regulations also prohibit the loading of product into a tank that exceeds the outage requirements in 173.24b and 173.314. The HMR do not currently specify load limits for tank cars.

Q4. Should the words “specification plate” as used in § 173.24b(d)(2), be interpreted as the word “stencil” when applying this section to tank cars?

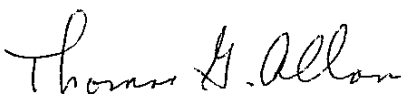
A4. As stated above, the term specification plate means the stamping located on each tank car head.

Q5. Is it correct that § 179.13 addresses limitations on a tank car's maximum size (by weight or capacity) rather than the maximum allowable load limit (as indicated by its stencil marking)?

A5. Your understanding is correct. Section 179.13 sets the upper limit for the maximum capacity and weight of any tank car built or converted after November 30, 1970. The load limit of a tank car is the difference between the maximum permissible gross weight on rail (based on the axle size) and the lightweight of the car. In addition, cars may not be overloaded by volume (See § 173.24b)

I hope this information is helpful. If you have any questions, please do not hesitate to contact this office.

Sincerely,



Thomas G. Allan  
Transportation Regulations Specialist  
Office of Hazardous Materials Standards

Gorsky  
179.13  
179.22

Marking &  
Weight Limitation



September 27, 2000

Office of Hazardous Materials Standards (DHM-10)  
Research & Special Programs Administration  
U.S. Department of Transportation  
400 Seventh Street, S.W.  
WASHINGTON, DC 20590-0001

REFERENCE: Formal Interpretation of Hazardous Materials Regulations

SUBJECT: Request for formal clarifications on certain HMR Provisions

Gentlemen:

Pursuant to the provisions of 49CFR §107.14, I request your formal response to the following questions related to the transportation of hazardous materials on rail.

- 1 The table in 49CFR §170.7 indicates a number of referenced sources. Should one construe the provisions/requirements/specifications in these referenced materials as being a part of the provisions/requirements/specifications of the 49CFR? Do all materials in the referenced sources become requirements of 49CFR or only those sections of the referenced sources specifically identified in the 49CFR sections become formal requirements?
- 2 If a 49CFR section refers to particular requirements in a referenced source and the referenced source further references a secondary source, do the pertinent sections of the secondary source become automatically a part of the 49CFR requirements? Let me give an example to highlight this issue.

49CFR §179.22 (a) (October 1, 1998 version) on "Marking" requires that "Each tank car must be marked according to the requirements in Appendix C of AAR Specification for Tank Cars." Section C7.00 "Load Limit Stencil", subsection (d) of Appendix C of Tank Car Specifications indicates that "Load limit is the difference between the total weight on rail for the journal size and the scale light weight of the car. See Field manual Rule 70.B.3.b."

In the above example, does the Field Manual of AAR referenced in Appendix C of the Tank Car Manual become, automatically by the secondary reference, a part of 49CFR? Do the requirements of Rule 70 of the Field manual, including the table of maximum permissible weights on rail of this rule, become a part of 49CFR requirements for the maximum permissible weight on rail for any freight car? If this is the case, will a tank car carrying a hazardous material and with a gross weight exceeding the maximum permissible weight specified (for the particular journal size) in Rule 70 (or for that matter in Rule 91) of the Field Manual of AAR be violating the provisions of the HM Regulations?

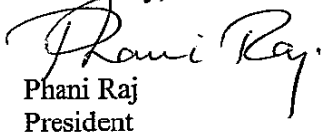
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- 3 What is the regulatory purpose of requiring that all tank cars be "Stenciled?" (49CFR §179.22 in the October 1, 1998 version and §179-100.21 in versions earlier than 1996). How are the specification on a stencil enforced by US DOT? There does not seem to be any requirement prohibiting the carrying of a hazardous material in a tank car in excess of the amount (weight or volume) specified on the stencil so long as the provisions of 49CFR §173.24b (a) "outage and filling limits" are complied with. Please clarify the HM regulations regarding the enforcement of stenciled amounts.
- 4 49CFR §173.24b (d) (2) states "A bulk packaging may not be loaded with a hazardous material that exceeds the maximum weight of the lading marked on the specification plate." In the case of the tank car since there is no "specification plate" and stencil is the medium that "specifies" the lading weight, do the provisions of this subsection apply to a tank car? Should the words "specification plate" be interpreted as the word "stencil" when the applicability of this subsection to a tank car is being evaluated? Please note that §173.24b (a) clearly applies to a tank car.
- 5 My interpretation of the provisions in 49CFR §179.13 "Tank car capacity and gross weight limitation" is that they apply only in so far as that the government permits the construction of the largest size (by weight) tank car with the maximum weight on rail of 263, 000 lbs, and therefore, the specified weight of 263,000 lbs has nothing to do with the enforcement of HMR for tank cars overweight relative to their maximum allowable weight (as indicated on the stencil) determined by their journal sizes. Please clarify this issue.

I look forward to receiving your formal interpretation to the above questions at the earliest possible time.

Yours truly,

  
Phani Raj  
President

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