



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

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

JAN 5 2000

Ms. Denise M. Oas
P.O. Box 7377
North Kansas City, MO 64116

Reference. No. 98-0347

Dear Ms. Oas:

This is in response to your letter concerning a provision in 49 CFR 173.33(a)(2). This provision restricts a person from loading or accepting different materials on the same multi-unit cargo tank motor vehicle if, as a result of any mixture of the materials, an unsafe condition would occur such as an explosion, fire, excessive increase in pressure or heat, or the release of toxic vapors. I apologize for the delay in responding and regret any inconvenience it may have caused.

In your letter, you referred to a statement published in the June 17, 1991 Federal Register publication in which we stated that the restriction in § 173.33(a)(2) was not intended to prevent the shipment of materials that, if mixed, would produce a moderate exothermic reaction that would not start a fire, rupture the tank or release acutely toxic vapors. You asked if this interpretation is correct and if, not, just how much of an increase in pressure or heat is permitted before creating a violation of this section.

The above interpretation is correct. In addition to meeting the provision in § 173.33(a)(2), cargo tanks must meet the general requirements for all bulk packagings in §§ 173.24 and 173.24b. Under § 173.24(b), a package used for the shipment of hazardous materials must be designed, constructed, maintained, filled, its contents so limited, and closed, so that under conditions that normally occur in transportation: 1) there will be no identifiable release of hazardous materials to the environment; 2) the effectiveness of the packaging will not be substantially reduced; and 3) there will be no mixture of gases or vapors in the package which could through any credible spontaneous increase of heat or pressure, significantly reduce the effectiveness of the packaging.

Many factors affect how materials may react with each other. They include the chemical composition and properties of the materials involved, and how they react to air, water, contaminants, or temperature conditions during transportation. Because there are so many variables, under the Hazardous Materials Regulations, the parties involved must evaluate the potential risk posed by different materials that are offered and accepted for transportation on the same multi-tank cargo tank motor vehicle. If your client has



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specific questions on making these determination, your client may contact Mr. Charles Hochman, Office of Hazardous Materials Technology, at (202) 366-4545 for assistance.

I hope this satisfies your request.

Sincerely,

A handwritten signature in cursive script that reads "Hattie L. Mitchell".

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

DENISE M. OAS
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(816) 455-7300

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Mack
§173.33

November 12, 1998

Mr. Edward T. Mazzullo - DHM -10
Director, Office of Hazardous
Materials Standards, RSPA
U.S. Department of Transportation
400 Seventh Street, Southwest
Room 8100
Washington, DC 20590

Dear Mr. Mazzullo,

A client of mine has asked for an interpretation from your office regarding 49 C.F.R. 173.33(a)(2) which provides that:

Two or more materials may not be loaded or accepted for transportation in the same cargo tank motor vehicle if, as a result of any mixture of the materials, an unsafe condition would occur, such as an explosion, fire, excessive increase in pressure or heat, or the release of toxic vapors.

A statement published in the Federal Register in 1991 noted that the intent of the section is to prevent shipment of materials that, if mixed, would cause a fire, a tank rupture or the release of acutely toxic vapors. 56 Fed. Reg. 27872 (June 17, 1991). It further noted that the section was not intended to prevent the shipment of materials that, if mixed, would produce a moderate exothermic reaction that would not start a fire, rupture the tank or release acutely toxic vapors.

This statement could be interpreted to mean that the only increase in pressure or heat that is prohibited is an increase sufficient to cause a fire, tank rupture or release of toxic vapors and that any increase of a lesser amount would be permitted. My client would like a statement from your office as to whether or not that interpretation is correct and, if not, just how much increase in pressure or heat is permitted before creating a violation of the section.

Thank you for your assistance.

Very Truly Yours,

Deni Oas

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