



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

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

AUG 28 2003

Officer George Barber
Department of California Highway Patrol
2072 Third Street
Oroville, CA 95965

Ref. No. 03-0120

Dear Officer Barber:

This is in response to your letter requesting clarification of the requirements under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) for the segregation and separation of Class 8 (corrosive) and Division 5.1 (oxidizing) hazardous materials being shipped by highway. The scenario you describe is as follows:

Hazardous materials were being shipped in intermediate bulk containers by motor vehicle described as empty and last contained "Hydrogen peroxide, aqueous solution, 5.1, UN2014, PG II" and "RQ Hypochlorite solution, 8, UN1791, PG III." The motor vehicle also contained 11,234 pounds of Class 8 liquids in drums on pallets. No tangible barriers were present between the Class 8 and the Division 5.1 hazardous materials, and the materials were offered by a single shipper. Specifically, you ask whether segregation can be accomplished by several inches of air space between the containers, and whether the two hazard classes may be loaded adjacent to each other if a barrier is placed between the two hazard classes.

Section 177.848(e)(3) provides that a Class 8 corrosive liquid and a Division 5.1 oxidizer

may not be loaded, transported, or stored together in the same transport vehicle or stored together during the course of transportation unless separated in a manner that, in the event of leakage from packages under conditions normally incident to transportation, commingling of hazardous materials would not occur.

Several inches of air space between containers of incompatible liquid hazardous materials does not satisfy the requirements of



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177-848

§ 177.848(e)(3). Air space would not prevent commingling of the liquid hazardous materials in the event of failure of the containers. Separation must be accomplished by a means of physical separation, such as non-permeable barriers, non-reactive freight or non-combustible, non-reactive absorbents between the packagings or elevating certain freight in a manner that prevents commingling of the liquid hazardous materials required to be separated.

With respect to whether the two hazard classes may be loaded adjacent to each other when a barrier is placed between the two hazard classes, § 177.848(e)(3) states that Class 8 liquids may not be loaded above or adjacent to Class 5.1 materials. However, the exception in § 177.848(e)(3) states that a shipper may load truckload shipments of Class 8 and Class 5.1 materials together when it is known that the mixture of contents would not cause a fire or a dangerous evolution of heat or gas. As used in this section, the term "truckload" means a shipment of hazardous materials loaded into a transport vehicle by a single shipper. Shipments of hazardous materials offered to a carrier by different shippers and loaded into a transport vehicle are not considered to be a truckload. In a telephone conversation, you stated that the carrier had received the hazardous materials from the same shipper. Therefore, provided it is known by the shipper that the mixture of contents would not cause a fire or a dangerous evolution of heat or gas, the Class 8 and Class 5.1 materials may be loaded together.

We note that the proper shipping name "Hypochlorite solution" is entered in parentheses on one of the shipping papers you provided. This is incorrect. The parentheses should be removed.

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

Sincerely,



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

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

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MC Intyre
§ 177.848
Segregation
03-0120

May 8, 2003
File No.: 0201.010665.OC

To: Research and Special Programs Administration
400 Seventh Street SW
Washington, DC 20590-0001

From: Department of California Highway Patrol
2072 Third Street
Oroville, CA 95965
Officer George Barber 10665

SEND TO (with arrow pointing to the 'To' address)

Copy to file (written vertically)

Please provide a letter of interpretation on the following issue relating to segregation of incompatible hazardous materials transported in the same vehicle.

While performing a vehicle inspection on a vehicle transporting hazardous materials classed as Class 8 liquid and Division 5.1. I discovered that the 5.1 materials and the Class 8 liquids were loaded adjacent to each other. The 5.1 material was an "Empty 330 Ga. Tote Bin Last contained Hydrogen Peroxide 35% Tech Grade" shipped under the shipping description of "Hydrogen Peroxide, Aqueous Solution, 5.1, UN2014, PGII, ERG # 154". It was loaded next to " an "Empty 330 Ga. Tote Bin Last contained Sodium Hypochlorite 12.5%, shipped under the shipping description of "RQ, (Hypochlorite Solution), 8, UN1791, PGIII, (sodium Hypochlorite 12.5%), ERG 154.". Additionally, the vehicle contained 11,234 pounds of corrosive liquids in drums on pallets. There were no tangible barriers between the hazardous materials on pallets and the IBC's or between the IBC's.

My questions are as follows:

- (1) Could segregation of the above liquids be accomplished by "several inches of air space" between the containers?"
- (2) If a barrier is placed between the materials, can the shipper load the 5.1 and 8 liquids adjacent to each other? The shipment was not a truck-load shipment.

Thank you for your prompt assistance in this matter.

Sincerely,

G. Barber/CHPO/10665

