



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

MAY 09 2019

Mark Cipolla  
Material Coordinator, Logistics  
Jet Research Center  
8432 S I-35W  
Alvarado, TX 76009-9775

Reference No. 18-0123

Dear Mr. Cipolla:

This letter is in response to your September 6, 2018, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to segregation of explosives. Specifically, you indicate that a motor vehicle combination consisting of a flatbed truck towing a flatbed trailer is transporting the following explosive materials:

- “UN0255, Detonators, electric, *for blasting*, 1.4B” and “UN0454, Igniters, 1.4S” packaged in 4G fiberboard boxes that are further overpacked on a wood pallet and placed on the flatbed truck.
- “UN0494, Jet perforating guns, 1.4D” are placed on the flatbed trailer.

We have paraphrased and answered your questions as follows:

- Q1. You ask if the motor vehicle configuration of the flatbed truck towing a flatbed trailer is considered a single transport vehicle.
- A1. The answer is no. There are two definitions that need to be considered—transport vehicle and motor vehicle. In your scenario, you have two transport vehicles that make up a motor vehicle. In accordance with § 171.8, a transport vehicle is defined as “a cargo-carrying vehicle such as an automobile, van, tractor, truck, semitrailer, tank car or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, rail car, etc.) is a separate transport vehicle.” Therefore, the flatbed truck and the flatbed trailer are each considered a separate transport vehicle.

Furthermore, § 171.8 defines a motor vehicle as “a vehicle, machine, tractor, trailer, or semitrailer, or any combination thereof, propelled or drawn by mechanical power and used upon the highways in the transportation of passengers or property.” Therefore, the flatbed truck and the flatbed trailer combination is considered a single motor vehicle.

Q2. You ask if the segregation method described in your request complies with the HMR, particularly in relation to packing instruction US 1.

A2. In accordance with the segregation table in § 177.848(f) and explanatory language in § 177.848(g):

- “UN0255, Detonators, electric, *for blasting*, 1.4B” and “UN0494, Jet perforating guns, 1.4D,” are not authorized for transport on the same transport vehicle.
- “UN0255, Detonators, electric, *for blasting*, 1.4B” and “UN0454, Igniters, 1.4S” may be transported together on the same transport vehicle.
- “UN0494, Jet perforating guns, 1.4D” and “UN0454, Igniters, 1.4S” may be transported together on the same transport vehicle.

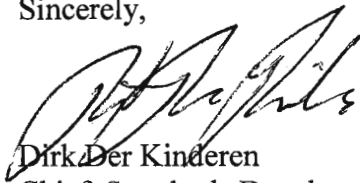
Furthermore, because your situation includes the transportation of detonators, it may be subject to additional motor vehicle segregation requirements under §177.835(g) (see § 177.848(g)(3)(iv)). Since the only other explosives in your example are classed as Division 1.4 hazardous materials and are not detonating cord, the restrictions in § 177.835(g) prohibiting the transportation on the same motor vehicle do not apply. Therefore, the combination of “UN0255, Detonators, electric, *for blasting*, 1.4B,” “UN0494, Jet perforating guns, 1.4D,” and “UN0454, Igniters, 1.4S” may be transported together on the same motor vehicle.

Additionally, because the shipment contains “UN0494, Jet perforating guns, 1.4D,” segregation requirements of § 173.62 packing instruction US 1 must also be met. In accordance with paragraph 1.a. of packing instruction US 1, initiation devices carried on the same motor vehicle must be segregated (each kind from every other kind) and from any gun, tool or other supplies, unless approved in accordance with § 173.56. The segregated initiation devices must be carried in a container having individual pockets for each such device or in a fully enclosed steel container lined with a non-sparking material and no more than two segregated initiation devices per gun may be carried on the same motor vehicle.

Based on the information provided in your request it is the opinion of this Office that the scenario described in your request meets the segregation requirements of the HMR, as long as the initiation devices (detonators and igniters) are appropriately segregated and transported in the appropriate containers specified in US 1, unless approved by the Associate Administrator, and no more than two detonators per jet perforating gun are transported on the motor vehicle. Please note that all other packaging and securement requirements outlined in US 1, along with other applicable HMR requirements, must be met.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dirk Der Kinderen', written in a cursive style.

Dirk Der Kinderen  
Chief, Standards Development  
Standards and Rulemaking Division

Gellen

18-0123

**Dodd, Alice (PHMSA)**

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**From:** INFOCNTR (PHMSA)  
**Sent:** Friday, September 07, 2018 3:53 PM  
**To:** Hazmat Interps  
**Subject:** FW: CFR 49 Part 173.62 Transportation of Jet Perforating Guns by Highway

Hi Alice and Ikeya,

Below is a request for a letter of interpretation.

I spoke with the caller and Eamonn about the segregation table. He specifically wants in writing how Packing Instruction US1 relates to this situation.

Thanks,  
Jonathon, HMIC

**From:** Mark Cipolla [mailto:Mark.Cipolla@Halliburton.com]  
**Sent:** Thursday, September 06, 2018 5:27 PM  
**To:** PHMSA HM InfoCenter <PHMSAHMInfoCenter@dot.gov>  
**Cc:** Michael Farley <Michael.Farley@halliburton.com>; Donte Villery <Donte.Villery@halliburton.com>; Brian Kelley <Brian.Kelley@halliburton.com>; Darren Walters <Darren.Walters@halliburton.com>  
**Subject:** RE: CFR 49 Part 173.62 Transportation of Jet Perforating Guns by Highway

Hi,  
With the below situation and the subject line using US1 for transportation of Jet perforating guns can you please provide literature on this subject?

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**From:** Mark Cipolla  
**Sent:** Thursday, September 06, 2018 6:50 AM  
**To:** [phmsa.hm-infocenter@dot.gov](mailto:phmsa.hm-infocenter@dot.gov)  
**Cc:** Michael Farley; Donte Villery; Brian Kelley; Darren Walters  
**Subject:** CFR 49 Part 177 Transportation of Hazardous Material by Highway

Hi,  
I'm trying to transport UN0494, Jet perforating guns, 1.4D with UN0255, Detonators, electric, 1.4B and UN0454, Igniters, 1.4S. I'm want to put them on a flatbed truck towing a flatbed trailer. The detonators and igniters are packed in fiberboard 4G boxes on a wood pallet wrapped. The guns will be transported on the flatbed trailer and the detonators and igniters will be transported on the flatbed truck towing the trailer. Is this truck and trailer considered one unit or two and is this legal to do?

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