



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

February 19, 2020

Clifford Bartley  
Matson  
426 N 44<sup>th</sup> Street  
Suite 250  
Phoenix, AZ 85008

Reference No. 19-0130

Dear Mr. Bartley:

This letter is in response to your December 5, 2018, letter and subsequent phone conversations with my staff requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to limited quantity shipments by vessel. You explain that your company ships Division 2.1 aerosol cans by vessel as a limited quantity material, noting that the aerosol cans are transported in temperature controlled refrigerated containers.

Your questions are paraphrased and answered as follows:

- Q1: You reference both § 176.80, which states that cargo moving in limited quantities is exempt from the segregation requirements, when loaded in transport vehicles and freight containers and § 176.200(f), which states that Class 2 flammable materials shipped by vessel may only be shipped in a power refrigerated temperature controlled container that has equipment capable of preventing ignition of flammable vapors by having a non-sparking or explosion-proof electric fitting with the cooling compartment. Specifically, you ask whether the requirements in § 176.200(f) of the HMR apply to limited quantity shipments of Division 2.1 flammable gases.
- A1: The answer is yes. The requirements of § 176.200(f) would apply to limited quantities of a Division 2.1 flammable gas.
- Q2: You reference the International Maritime Dangerous Goods (IMDG) Code, noting that sections 3.4.3 and 3.4.4 exempt limited quantity shipments from stowage and segregation. You also express your belief that section 7.3.7 does not apply to limited quantity shipments by vessel. Specifically, you ask whether limited quantities can be shipped in accordance with the IMDG Code if at least one leg of the transport is by vessel and, if so, whether the shipment would be subject to the provisions in section 7.3.7.6.3 of the IMDG Code.

A2: The answer is yes. Provided at least one leg of transport is by vessel, limited quantities can be shipped in accordance with the IMDG Code. While you are correct that limited quantities of hazardous materials shipped under the IMDG Code are exempt from stowage and segregation requirements, limited quantity shipments of Division 2.1 compressed gases would still be subject to the requirements in section 7.3.7.6.3. Similar to § 176.200(f) of the HMR, section 7.3.7.6.3 of the IMDG Code requires use of explosion proof electrical fittings when flammable gases are shipped in containers that require temperature control for commercial reasons, rather than safety reasons.

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 "T. Glenn Foster". The signature is fluid and cursive, with a prominent flourish at the end.

T. Glenn Foster  
Chief, Regulatory Review and Reinvention Branch  
Standards and Rulemaking Division

Andrews  
19-0130  
IMDG

December 5, 2018

**Matson**

Clifford Bartley  
Manager Dangerous Goods  
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Phoenix, AZ85008

Mr. Shane Kelley, Director  
Standards and Rulemaking Division  
Pipeline and Hazardous Materials Safety Administration  
Attn: PHH-10, U.S. Department of Transportation, East Building  
1200 New Jersey Avenue, SE.  
Washington, DC 20590-0001

Request for a "Letter of Interpretation"

Dear Mr. Kelley:

Matson is one of the United States largest American Flag vessel carriers. Our vessels provide the transportation needs for the Jones Act locations of Hawaii, Alaska and Guam as well as servicing some of the international cargo transportation needs of foreign locations off the west coast. As a US Flag carrier who also services the international community, we are regularly challenged in meeting the regulatory requirements of the HMR and the IMDG Code as we seek to provide the transportation needs of Jones Act locations that depend on the shipping industry for their survival. Ensuring regulatory compliance in a dynamic regulatory environment sometimes lead to finding gaps caused by unintentional consequences of regulatory changes.

The offshore domestic locations have been serviced by domestic water carriers for well over 50 years. Many products that originally moved under the ORM-D classification now moves as Limited Quantities. These product are of various hazmat classes. These products initially moved without shipping paper by highway, rail and water but under the reclassification scheme, they now move with hazmat documentation by vessel. This has caused a potential issue with the class 2.1 aerosols that now move under the "Limited Quantity" exception in refrigerated containers. I am writing for a "Letter of Interpretation" to clarify the issue of "Limited Quantities" in refrigerated containers.

My question is can class 2.1 Limited Quantity cargo be transported in temperature controlled refrigerated containers?

Many of the food supplies have in the past shipped the "Reddi Whip" and other 2.1 products that have a flammable gas propellant in temperature controlled refrigerated containers. Products of this nature and others now move under the "Limited Quantity" exception. Other non-food suppliers ship these 2.1 products in reefers to places like Alaska to maintain the stability of the products. If they become too cold, they are unusable for the purpose intended.

The IMDG Code exempts "Limited Quantity" shipments from stowage and segregation in parts 3.4.3 and 3.4.4. It also specifically states parts 7.2 thru 7.7 does not apply. Part 7.3.7 "Cargo Transport Units Under Temperature Control" does not apply.

In 49CFR, 176.80 states that cargo moving in limited quantities are exempt from the segregation requirements. The regulations in 49CFR176.200(f) read as follows:

(f) Class 2 (compressed gas) material must be kept as cool as practicable and be stowed away from all sources of heat and ignition. Any package containing a Division 2.1 (flammable gas) material is restricted from transport in powered refrigerated temperature controlled containers, unless the equipment is capable of preventing ignition of flammable vapors by having non-sparking or explosion-proof electric fittings within the cooling compartment

Does this apply to the stowage of cargo moving under “Limited Quantities”?

If 49CFR176.200(f) does apply to limited quantity cargo, can the shipments of limited quantities in which at least one leg of the transport ship and be stowed in accordance with the IMDG Code which allows “Limited Quantity” cargo to move in refrigerated containers without exception?

These shipment has move as ORM-D for many years under the radar without any shipping papers or any known incidents by vessel. It is our wish to continue to safely service the Jones Act communities with these products.

We value your guidance on these questions.

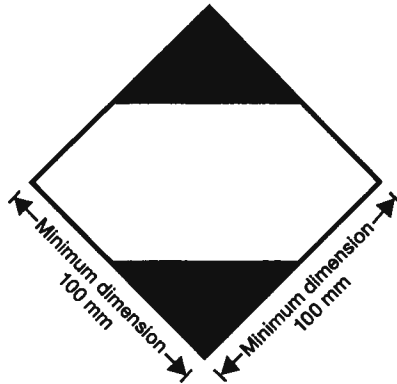
Sincerely,

Clifford Bartley  
Manager Dangerous Goods  
Matson  
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3.4.4.2 The segregation provisions of chapter 7.2 to 7.7 including the segregation provisions in column 16b of the Dangerous Goods List are not applicable for packagings containing dangerous goods in limited quantities or in relation to other dangerous goods. However, articles of division 1.4, compatibility group S shall not be stowed in the same compartment or hold, or cargo transport unit with dangerous goods of class 1 of compatibility groups A and L.

### 3.4.5 Marking and placarding

3.4.5.1 Except for air transport, packages containing dangerous goods in limited quantities shall bear the mark shown below:



Mark for packages containing limited quantities

The mark shall be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness. The mark shall be in the form of a square set at an angle of 45° (diamond-shaped). The top and bottom portions and the surrounding line shall be black. The centre area shall be white or a suitable contrasting background. The minimum dimensions shall be 100 mm × 100 mm and the minimum width of the line forming the diamond shall be 2 mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown. If the size of the package so requires, the minimum outer dimensions shown above may be reduced to be not less than 50 mm × 50 mm provided the mark remains clearly visible. The minimum width of the line forming the diamond may be reduced to a minimum of 1 mm.

3.4.5.2 Packages containing dangerous goods packed in conformity with the provisions of part 3, chapter 4 of the ICAO *Technical Instructions for the Safe Transport of Dangerous Goods by Air* may bear the mark shown below to certify conformity with these provisions:



Mark for packages containing limited quantities conforming to part 3, chapter 4 of the ICAO *Technical Instructions for the Safe Transport of Dangerous Goods by Air*

The mark shall be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness. The mark shall be in the form of a square set at an angle of 45° (diamond-shaped). The top and bottom portions and the surrounding line shall be black. The centre area shall be white or a suitable contrasting background. The minimum dimensions shall be 100 mm × 100 mm and the minimum width of the line forming the diamond shall be 2 mm. The symbol "Y" shall be placed in the centre of the mark and shall be clearly visible. Where dimensions are not specified, all features shall be in approximate proportion to those shown. If the size of the package so requires, the minimum outer dimensions shown

## Chapter 3.4

### *Dangerous goods packed in limited quantities*

- 3.4.1 General**
- 3.4.1.1** This chapter provides the provisions applicable to the transport of dangerous goods of certain classes packed in limited quantities. The applicable quantity limit for the inner packaging or article is specified for each substance in column 7a of the Dangerous Goods List of chapter 3.2. In addition, the quantity "0" has been indicated in this column for each entry not permitted to be transported in accordance with this chapter.
- 3.4.1.2** Limited quantities of dangerous goods packed in such limited quantities, meeting the provisions of this chapter, are not subject to any other provisions of this Code except the relevant provisions of:
- .1 Part 1, chapters 1.1, 1.2 and 1.3;
  - .2 Part 2;
  - .3 Part 3, chapters 3.1, 3.2, 3.3;
  - .4 Part 4, 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8;
  - .5 Part 5, 5.1.1 except 5.1.1.6, 5.1.2.3, 5.2.1.7, 5.2.1.9, 5.3.2.4, and chapter 5.4;
  - .6 Part 6, construction requirements of 6.1.4, 6.2.1.2 and 6.2.4;
  - .7 Part 7, 7.1.3.2, 7.6.3.1 and 7.3 except 7.3.3.15 and 7.3.4.1.
- 3.4.2 Packing**
- 3.4.2.1** Dangerous goods shall be packed only in inner packagings placed in suitable outer packagings. Intermediate packagings may be used. In addition, for articles of division 1.4, compatibility group S, the provisions of section 4.1.5 shall be fully complied with. The use of inner packagings is not necessary for the transport of articles such as aerosols or "receptacles, small, containing gas". The total gross mass of the package shall not exceed 30 kg.
- 3.4.2.2** Except for articles of division 1.4, compatibility group S, shrink-wrapped or stretch-wrapped trays meeting the conditions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 are acceptable as outer packagings for articles or inner packagings containing dangerous goods transported in accordance with this chapter. Inner packagings that are liable to break or be easily punctured, such as those made of glass, porcelain, stoneware or certain plastics, shall be placed in suitable intermediate packagings meeting the provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8, and be so designed that they meet the construction requirements of 6.1.4. The total gross mass of the package shall not exceed 20 kg.
- 3.4.2.3** Liquid goods of class 8, packing group II in glass, porcelain or stoneware inner packagings shall be enclosed in a compatible and rigid intermediate packaging.
- 3.4.3 Stowage**
- Dangerous goods packed in limited quantity are allocated stowage category A as defined in 7.1.3.2. The other stowage provisions indicated in column 16a of the Dangerous Goods List are not applicable.
- 3.4.4 Segregation**
- 3.4.4.1** Different dangerous substances in limited quantities may be packed in the same outer packaging, provided:
- .1 the substances comply with the provisions of 7.2.6.1; and
  - .2 the segregation provisions of chapter 7.2, including the segregation provisions in column 16b of the Dangerous Goods List, are taken into account. However, notwithstanding the individual provisions specified in the Dangerous Goods List, substances in packing group III within the same class may be packed together subject to compliance with 3.4.4.1.1 of the IMDG Code. The following statement shall be included in the transport document: "Transport in accordance with 3.4.4.1.2 of the IMDG Code" (see 5.4.1.5.2.2).

**7.3.4.2 Segregation in relation to foodstuffs**

△ 7.3.4.2.1 Dangerous goods having a primary or subsidiary hazard of classes 2.3, 6.1, 6.2, 7 (with the exception of UN 2908, 2909, 2910 and 2911), 8 and dangerous goods having a reference to 7.3.4.2.1 in column 16b of the Dangerous Goods List shall not be transported together with foodstuffs (see 1.2.1) in the same cargo transport unit.

7.3.4.2.2 Notwithstanding the provisions in 7.3.4.2.1, the following dangerous goods may be transported with foodstuffs provided that they are not loaded within 3 m from foodstuffs:

- .1 dangerous goods of packing group III of classes 6.1 and 8;
- .2 dangerous goods of packing group II of class 8; and
- △ .3 any other dangerous goods of packing group III with a subsidiary hazard of classes 6.1 or 8; and
- .4 dangerous goods having a reference to 7.3.4.2.2 in column 16b of the Dangerous Goods List.

**7.3.5 Tracking and monitoring equipment**

When security devices, beacons or other tracking or monitoring equipment are used, they shall be securely installed to the cargo transport unit and shall be of a certified safe type\* for the dangerous goods that will be carried within the cargo transport unit.

**7.3.6 Opening and unloading cargo transport units**

7.3.6.1 Cargo transport units shall be approached with caution. Before opening the doors, the nature of the contents and the possibility that leakages may have caused an unsafe condition, concentration of toxic or flammable vapours, or an oxygen-enriched or oxygen-depleted atmosphere, shall be considered.

7.3.6.2 After a cargo transport unit carrying dangerous goods has been unpacked or unloaded, precautions shall be taken to ensure that there is no contamination likely to make the cargo transport unit dangerous.

7.3.6.3 After unpacking or unloading corrosive substances, particular attention shall be paid to cleaning, as residues may be highly corrosive to the metal structures.

7.3.6.4 When the cargo transport unit offers no further hazard, the dangerous goods placards and other marks related to dangerous goods shall be removed, masked or otherwise obliterated.

△ **7.3.7 Cargo transport units under temperature control**

**7.3.7.1 Preamble**

7.3.7.1.1 If the temperature of certain substances (such as organic peroxides and polymerizing or self-reactive substances) exceeds a value which is typical of the substance as packaged for transport, a self-accelerating decomposition or polymerization possibly of explosive violence, may result. To prevent such decomposition or polymerization, it is necessary to control the temperature of such substances during transport. Other substances not requiring temperature control for safety reasons may be transported under controlled temperature conditions for commercial reasons.

7.3.7.1.2 The provisions for the temperature control of certain specified substances are based on the assumption that the temperature in the immediate surroundings of the cargo does not exceed 55°C during transport and attains this value for a relatively short time only during each period of 24 h.

\* Refer to the Recommendations published by the International Electrotechnical Commission, in particular, to publication IEC 60079.

- 7.3.7.6.3** When flammable gases not requiring temperature control for safety reasons are transported under temperature control conditions for commercial reasons, explosion proof electrical fittings are required.
- 7.3.7.7** **Special provisions for vehicles transported on ships**  
Insulated, refrigerated and mechanically refrigerated vehicles shall conform to the provisions of 7.3.7.4 and 7.3.7.5 as appropriate. In addition, the refrigerating appliance of a mechanically refrigerated vehicle shall be capable of operating independently of the engine used to propel the vehicle.
- 7.3.7.8** **Approval**  
The competent authority may approve that less stringent means of temperature control may be used or that artificial refrigeration may be dispensed with under conditions of transport such as short international voyages or low ambient temperatures.
- 7.3.8** **Loading of cargo transport units on board ships**  
Before loading, cargo transport units used for the transport of dangerous goods shall be examined for external signs of damage, leakage or sifting of contents. Any cargo transport unit found to be damaged, leaking or sifting shall not be loaded on to a ship until repairs have been effected or damaged packages have been removed.