



U.S. Department  
of Transportation

**Pipeline and  
Hazardous Materials Safety  
Administration**

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

MAY 4 2005

Ms. Christine Arcari  
Environmental Specialist  
Hogan & Hartson L.L.P.  
555 13<sup>th</sup> Street, NW  
Washington, DC 20004

Ref. No. 04-0166

Dear Ms. Arcari:

This responds to your e-mail requesting clarification of the packaging requirements for insoluble solids packaged in liquids under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask whether an insoluble solid such as Phosphorus, white or yellow (UN1381) must be placed in a specification packaging (1A2, removable head steel drum) rated for both solids and liquids when packaged under water as prescribed in § 173.188. I apologize for the delay in responding and any inconvenience it may have caused.

The answer is no. As prescribed in § 173.188(a)(2), white or yellow phosphorus may be placed in water in a removable head steel drum (1A2) with a capacity not over 115 L (30 gallons). As specified in the § 173.188 introductory text, the drum must be rated at the Packing Group I performance level and, because the drum contains a material that remains in a liquid phase when transported, the drum need only be tested for liquids. A drum containing a pyrophoric material such as white or yellow phosphorus must contain sufficient water so that the material remains covered in transportation regardless of orientation.

I trust this satisfies your inquiry. Please contact us if we can be of further assistance.

Sincerely,

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



040166

173.188

**Stevens, Michael**

**From:** Mazzullo, Ed  
**Sent:** Thursday, May 06, 2004 8:27 AM  
**To:** Stevens, Michael  
**Cc:** Mitchell, Hattie  
**Subject:** FW: Regulatory interpretations regarding solids under water  
**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Stevens  
 § 173.188  
 Phosphorus  
 04-0166

Please handle this.

Ed

-----Original Message-----

**From:** Arcari, Christine J. [mailto:CJArcari@HHLAW.com]  
**Sent:** Wednesday, May 05, 2004 4:03 PM  
**To:** Mazzullo, Ed  
**Cc:** Kastner, Kenneth M.  
**Subject:** Regulatory interpretations regarding solids under water

Dear Edward Mazzullo,

Ken Kastner and I recently spoke with Del Billings and he suggested we contact you in order to locate existing regulatory interpretations regarding shipments of solids placed in water. Specifically the material being shipped would be phosphorus, white or yellow, under water (UN1381) packaged in steel drums (1A2). Mr. Billings said that he recalls some interpretation letters stating that if a solid hazardous material is shipped with a liquid component it must be packaged in a packaging rated for both solids and liquids. Attached is one pertinent interpretation letter that we located on your web site. Are there any others you can provide us? Any additional information you could provide us with would be greatly appreciated.

Sincerely,

Christine Arcari

Environmental Specialist  
 Hogan & Hartson L.L.P  
 555 13th Street, NW  
 Washington, DC 20004  
 Tel: (202) 637-5872  
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07/19/2004

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U.S. Department  
of Transportation

**Pipeline and  
Hazardous Materials Safety  
Administration**

**MAY 16 2005**

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

Major Mark P. Wyrosdick  
Department of the Army  
Military Surface Deployment and Distribution Command  
Operations Center  
661 Sheppard Place  
Fort Eustis, VA 23604-1644

Ref. No. 04-0247

Dear Major Wyrosdick:

This responds to your October 15, 2004 letter requesting clarification of requirements in the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) concerning the transportation of explosives by rail. Specifically, you ask whether flat cars designated "FC" and "FCA" in the Official Railway Equipment Register (Register) may be used to transport Class 1 materials. Please accept my apology for the delay in responding and any inconvenience this may have caused.

Section 174.104 of the HMR generally requires Division 1.1 or 1.2 materials to be transported in closed cars meeting specific regulatory requirements. However, the HMR include exceptions that allow for the transportation of Class 1 materials on flatcars, including those designated FC and FCA in the Register. For example, § 174.101(b) provides that "[b]oxed bombs, rocket ammunition and rocket motors, Division 1.1, 1.2, or 1.3 (explosive) materials, which due to their size cannot be loaded in closed cars, may be loaded in open-top cars or on flatcars, provided they are protected from the weather and accidental ignition." Further, § 174.101(n) provides that Division 1.1 or 1.2 explosive material (except black powder packed in metal containers) may be transported in a freight container on a flatcar, provided certain conditions are met (e.g., the freight container is "designed, constructed, and maintained so as to be weather tight and capable of preventing the entrance of sparks," the freight container meets certain impact resistance tests, is properly placarded and has a properly executed car certificate, and provided the freight container and the lading inside the container is properly blocked and braced). Finally, § 174.101(o) provides that Division 1.1, 1.2, or 1.3 explosive material may be transported in a "tight closed" trailer on a flatcar, provided certain conditions are met. Section 174.101(o) also provides that, in certain instances, when Division 1.1, 1.2, or 1.3 materials cannot be loaded into closed trailers because of their size, the materials may be transported on open-top trailers, so long as the materials are protected against accidental ignition and certain other conditions are met.

You also ask whether the Federal Railroad Administration (FRA) has delegated authority to represent the Pipeline and Hazardous Materials Safety Administration (PHMSA; formerly the Research and Special Programs Administration) for interpretations of the HMR. As the agency



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174.101  
174.104

delegated authority to issue hazardous materials safety and security regulations, PHMSA is responsible for issuing formal legal interpretations of the HMR and the Federal hazardous materials transportation law (Federal hazmat law; 49 U.S.C. 5101 *et seq.*), which are published in the *Federal Register*, and for providing informal interpretations (advice, guidance, and clarification) concerning the requirements of Federal hazmat law and the HMR. FRA has delegated authority over "all areas of railroad safety," including the enforcement of the hazardous materials regulations issued by PHMSA. FRA and the other DOT operating administrations are authorized to issue informal interpretations that apply to a single mode of transportation or that raise issues that have been previously addressed in letters of interpretation. In consultation with PHMSA, FRA issues such informal interpretations with respect to rail transportation of hazardous materials or well-settled interpretations, such as the two informal interpretations enclosed with your letter.

If you have any further questions regarding the above interpretation, please do not hesitate to contact this office or FRA's Hazardous Materials Staff Director, Mr. William Schoonover, at (202) 493-6229.

Sincerely,



Susan Gorsky  
Acting Director  
Office of Hazardous Materials Standards



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
MILITARY SURFACE DEPLOYMENT AND DISTRIBUTION COMMAND  
OPERATIONS CENTER  
661 SHEPPARD PLACE  
FORT EUSTIS, VA 23604-1644

Safety Division

October 15, 2004

Mr. Edward T. Mazzullo  
Director, DHM-10  
Office of Hazardous Materials Standards  
Research and Special Programs Administration  
U.S. Department of Transportation  
400 Seventh Street, SW  
Washington, DC 20590

Webb  
§174.101  
§174.104  
Explosive  
04-0247

Dear Sir:

In accordance with the provisions of Title 49, Code of Federal Regulations (CFR), Section 105.20, the Department of Defense hereby requests interpretation of hazardous materials regulations as outlined below. The following file number has been assigned:

**File Number: 201-04 (1015)**

**Re: Request Official Interpretation of standards 49 CFR 174.104 and 174.101**

**Proponent: Department of Defense**

We are requesting an official interpretation of the following citations and their impact upon DOD operations affecting the transportations of Class 1 explosive materials.

1. **49 CFR 174.104** "Division 1.1 or 1.2 (explosive) materials; car selection, preparation, inspection, and certification." Specifically, 174.104(a) Except as provided in 174.101....(n).... Division 1.1 or 1.2 (explosive materials being transported by rail may be transported only in a certified and properly placarded closed car...."

2. **49 CFR 174.101** "Loading Class 1 (explosive) materials." Specifically, 174.104(n) a container car or freight container on a flatcar...". ...(2) A container car or car which is loaded with freight containers. ...."

Our question is what is the official position of the Department of Transportation (DOT) with respect to the categorization of rail car equipment as published in the Official Railway Equipment Register (attachment #3)? The publication assigns an accepted code for rail car construction defined by the Association of American Railroads using a Mechanical Designation Code (MDC) which is applicable to all rail car equipment. We are interested in the following designations:

**MDC Modern Flat Car Equipment**

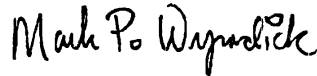
- 1. FC Flat car well type.
- 2. FCA Flat car articulated well type.
- 3. FCA Flat car articulated skeltonized/spine type.

Our understanding of the above standards indicates they are intended for boxcars and container cars. There is not a clearly defined connection relating to the questions we pose regarding the more modern flat car equipment above. Further, we are in possession of interpretations (attachments 1 & 2) issued previously by the Federal Railroad Administration (FRA) providing guidance with respect to the employment of boxcars for the transportation of explosives. We have no issues with those interpretations; however, we maintain an interest in concluding is the FRA delegated authority to represent the Research and Special Programs Administration (RSPA) in matters of the transportation of hazardous materials, and at issue is how does railroad articulated flat car equipment fall within the scope of those standards in question?

-2-

If our issues are a matter for change to those regulatory standards above employing the mechanisms available through 49 CFR Part 106 "Rulemaking Procedures" we would be available for consultation and participation. This request is submitted by Mr. Joseph P. Dugan, phone (757) 878-8294, e/mail [duganj@sddc.army.mil](mailto:duganj@sddc.army.mil), Safety Staff., Military Surface Deployment and Distribution Command, 661 Sheppard Place, Fort Eustis, VA 23604-1644.

Sincerely,



Mark P. Wyrosdick  
Major, US Air Force  
Chief of Safety

Encl