



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

OCT 16 2007

Mr. Shawn Burke
Manager, Terminal Operations
Sea Star Line LLC
Elizabeth, New Jersey 07207

Ref. No. 07-0155

Dear Mr. Burke:

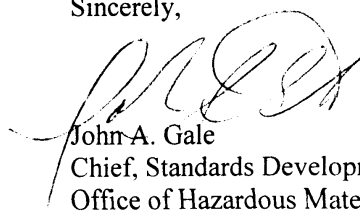
This responds to your August 9, 2007 fax requesting clarification on the definition of ventilation related terms under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask for the definitions of "ventilated", "well ventilated", and "mechanically ventilated" holds in vessels under the HMR.

Generally, there are two types of ventilation for a cargo hold: mechanical ventilation and natural ventilation. Mechanical ventilation can be simply defined as power-generated ventilation. For Safety of Life at Sea (SOLAS) vessels, this typically means at least six air changes per hour in the cargo space, based on an empty cargo space, and the removal of vapors from the upper or lower parts of the cargo space. This definition can be found in SOLAS Chapter II-2 Regulation 19. Natural ventilation is simply ventilation that is not power-generated. This type of ventilation usually takes the form of openings, vents, or goosenecks in the cargo hold.

Under the HMR, "ventilated" means the removal of dangerous vapors and gas from the cargo hold. Either natural or mechanical ventilation may be used provided the ventilation system has the capacity to prevent a dangerous accumulation of vapors or gases. For purposes of the Part 176 of the HMR, "well ventilated" has the same meaning as "ventilated."

I hope this answers your inquiry.

Sincerely,


John A. Gale
Chief, Standards Development
Office of Hazardous Materials Standards



070155

171.8
176.305(c)(1)

Drakeford, Carolyn <PHMSA>

From: INFOCNTR <PHMSA>
Sent: Thursday, August 09, 2007 4:44 PM
To: Drakeford, Carolyn <PHMSA>
Subject: FW: Interpretation

Boothe
\$171.8
§ 176.305(c)(1)
Definition
07-0155

Wants a written letter of Interp.

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

From: shawnburke@seastarline.com [mailto:shawnburke@seastarline.com]
Sent: Thursday, August 09, 2007 4:30 PM
To: INFOCNTR <PHMSA>
Subject: Interpretation

To who it may concern:

I am interested in an interpretation / definition of the terms "ventilated", "well-ventilated", and "mechanically ventilated" holds as they appear in CFR 49, Parts 100 to 185, as they are each listed as distinct stowage provisions in the CFR.

I was unable to find definitions in the CFR or on the PHMSA website.

Many thanks for your assistance this matter and I look forward to your reply

Respectfully Submitted

Mr. Shawn Burke
Manager - Terminal Operations
Sea Star - Elizabeth / Houston
(908) 965-0601

Boothe, Deborah <PHMSA>

From: Boothe, Deborah <PHMSA>
Sent: Tuesday, October 09, 2007 9:10 AM
To: 'Richard.C.Bornhorst@uscg.mil'
Cc: Boothe, Deborah <PHMSA>
Subject: RE: 07-0155

Importance: High

Richard,

Thank you! Have a great day!

Deborah Boothe
Transportation Regulations Specialist
PHMSA/Office of Hazardous Materials Standards PHH-10
202-366-4478

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

From: Richard.C.Bornhorst@uscg.mil [mailto:Richard.C.Bornhorst@uscg.mil]
Sent: Tuesday, October 09, 2007 8:49 AM
To: Boothe, Deborah <PHMSA>
Subject: RE: 07-0155

Deborah,

The interpretation looks good. I'm sorry I haven't responded sooner. Let me know if you need anything else.

Richard C. Bornhorst
Chemical Engineer
Hazardous Materials Standards
U.S. Coast Guard
(202) 372-1426

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

From: deborah.boothe@dot.gov [mailto:deborah.boothe@dot.gov]
Sent: Friday, October 05, 2007 3:17 PM
To: Bornhorst, Richard
Cc: deborah.boothe@dot.gov
Subject: FW: 07-0155
Importance: High

Good afternoon Richard,

I'm just following up to see how your review/concurrence is progressing on clarification letter Ref. No. 07-0155 on ventilation. Thank you again for your review/concurrence.

Have a great weekend.

Deborah

From: Boothe, Deborah <PHMSA>
Sent: Tuesday, September 18, 2007 2:55 PM
To: Bornhorst, R
Cc: Boothe, Deborah <PHMSA>
Subject: 07-0155
Importance: High

Good afternoon Richard,

Attached is the letter on ventilation with your revisions/edits incorporated. Please review/concur for grid purposes if you concur with this version of the letter/response. Thank you again for your assistance. Hope you're having a great day.

Deborah Boothe

DOT/PHMSA

Office of Hazardous Materials Standards/PHH-10

USCG Input for 07-0155

Boothe, Deborah <PHMSA>

From: Richard.C.Bornhorst@uscg.mil on behalf of Bornhorst, Richard
[Richard.C.Bornhorst@uscg.mil]
Sent: Wednesday, August 22, 2007 9:51 AM
To: Boothe, Deborah <PHMSA>
Subject: RE: Request for assistance on interp letter Ref. No. 07-0155: Definitions of "ventilated", "well ventilated" and "mechanically ventilated"

Deborah,

I received the fax. This interpretation request is quite vague. These terms may have slightly different meanings given the context of a specific regulation. Nonetheless, I will try to answer...

In general, there are two types of ventilation for a cargo hold: mechanical ventilation and natural ventilation. Mechanical ventilation can be simply defined as power-generated ventilation. For SOLAS vessels this typically means at least six air changes per hour in the cargo space, based on an empty cargo space, and the removal of vapors from the upper or lower parts of the cargo space. This definition can be found in SOLAS Chapter II-2 Regulation 19.

Natural ventilation is simply ventilation that is not power-generated. This type of ventilation usually takes the form of openings, vents, or goosenecks in the cargo hold.

In the context of the HMR, I take "ventilated" to mean the removal of dangerous vapors and gas from the cargo hold. Either natural or mechanically ventilation may be used provided the ventilation system has the capacity to prevent a dangerous accumulation of vapors or gases. I take "well ventilated" to mean the same thing as "ventilated." To my knowledge this term is only used in a three locations in Part 176: 176.93(d), 176.84(b) Code 84, and 176.400(b). I did a search for Code 84 and it is not assigned to single entry in the Hazardous Materials Table. The reference in 176.93(d) could simply be "ventilated." The reference in 176.400(b) refers to the stowage of organic peroxides. I think the use of "well" here is simply to stress the importance of ventilation rather than impose additional requirements. Furthermore, organic peroxides are not required to be mechanically ventilated under SOLAS.

It should also be noted that the vague terminology also appears in the IMDG Code and is likely how it found its way into the HMR. Attempts have been made to provide definitions in the Code but there has not been wide support for prescriptive ventilation requirements.

Since this interpretation request is fairly general/vague in nature I would caveat the interpretation with the idea that the definition may vary depending on the context of the reference in the HMR and the hazardous materials to be carried.

Let me know if you need anything else.

Best Regards,

Richard C. Bornhorst
Chemical Engineer
Hazardous Materials Standards
U.S. Coast Guard
(202) 372-1426

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

From: deborah.boothe@dot.gov [mailto:deborah.boothe@dot.gov]
Sent: Friday, August 17, 2007 1:33 PM
To: Bornhorst, Richard
Subject: RE: Request for assistance on interp letter Ref. No. 07-0155: Definitions of "ventilated", "well ventilated" and "mechanically ventilated"
Importance: High

Thanks Richard. I just faxed the incoming request for interpretation to you a couple of minutes ago. Have a great weekend.

Deborah

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

From: Richard.C.Bornhorst@uscg.mil [mailto:Richard.C.Bornhorst@uscg.mil]

Sent: Friday, August 17, 2007 11:23 AM

To: Boothe, Deborah <PHMSA>

Subject: RE: Request for assistance on interp letter Ref. No. 07-0155:

Definitions of "ventilated", "well ventilated" and "mechanically ventilated"

My fax #: 202-372-1926

Richard C. Bornhorst

Chemical Engineer

Hazardous Materials Standards

U.S. Coast Guard

(202) 372-1426

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

From: deborah.boothe@dot.gov [mailto:deborah.boothe@dot.gov]

Sent: Friday, August 17, 2007 11:18 AM

To: Bornhorst, Richard

Subject: RE: Request for assistance on interp letter Ref. No. 07-0155:

Definitions of "ventilated", "well ventilated" and "mechanically ventilated"

Importance: High

Thanks Richard. I'm not sure why the request didn't go directly to you.

If you would rather we (PHMSA) transfer the request to you for your direct response, I'll talk to my supervisor, Susan Gorsky, to find out how to do that. If you'll email me your fax number, I'll fax the request for interpretation to you for your review today. Have a great day.

Deborah Boothe

DOT/PHMSA/Office of HazMat Stds/PHH-10

202-366-4478

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

From: Richard.C.Bornhorst@uscg.mil [mailto:Richard.C.Bornhorst@uscg.mil]

Sent: Friday, August 17, 2007 11:03 AM

To: Boothe, Deborah <PHMSA>

Subject: RE: Request for assistance on interp letter Ref. No. 07-0155:

Definitions of "ventilated", "well ventilated" and "mechanically ventilated"

Deborah,

I am happy to help out any way I can. I'm surprised the company is asking PHMSA how to ventilate a cargo hold and not the Coast Guard directly. Please forward the interpretation request and I will get back to you with some guidance.

Richard C. Bornhorst

Chemical Engineer

Hazardous Materials Standards

U.S. Coast Guard

(202) 372-1426

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

From: deborah.boothe@DOT.GOV [mailto:deborah.boothe@DOT.GOV]

Sent: Friday, August 17, 2007 10:49 AM

To: Bornhorst, Richard

Cc: deborah.boothe@DOT.GOV

Subject: Request for assistance on interp letter Ref. No. 07-0155:

Definitions of "ventilated", "well ventilated" and "mechanically ventilated"

Importance: High

Good morning,

I've been assigned to draft a response to a request for an interp that asks for the definitions of: "ventilated", "well ventilated", and "mechanically ventilated", holds regarding vessel stowage under the HMR.

The email/request is from Shawn Burke, Manager, Terminal Operations at Sea Star in Houston, Texas. The reference number for our response is Ref. No. 07-0155. I've looked in the HMR and I have not found any specific definitions for these terms. Do you have any definitions for these terms or can you give me some language to use to define each of these terms? I'd appreciate any assistance in completing my first draft response. I have approximately two weeks to complete my first draft response. So, any information you can give me before the end of August would be greatly appreciated!

Thank you very much for your assistance. Have a great day and weekend.

Deborah Boothe

DOT/PHMSA/Office of HazMat Standards/PHH-10

1200 New Jersey Ave, SE

Washington, DC 20590

202-366-4478