



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

August 31, 2021

Rachael Gunaratnam
Investigator
Office of Railroad, Pipeline and Hazardous Materials Investigations
National Transportation Safety Board (NTSB)
490 L'Enfant Plaza
Washington, DC 20594

Reference No. 21-0061

Dear Ms. Gunaratnam:

This letter is in response to your June 1, 2021, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to nurse tanks. Specifically, you seek clarification on whether the HMR require closure of a liquid discharge valve(s) on a nurse tank carrying anhydrous ammonia while in highway transportation.

The answer is yes. In accordance with the general requirements for packaging and packages in § 173.24(b), each package used for the shipment of hazardous materials under the HMR must be designed, constructed, maintained, filled, its contents so limited, and *closed* (emphasis added), so that under conditions normally incident to transportation, there will be no identifiable (without the use of instruments) release of hazardous materials to the environment.

Furthermore, in accordance with § 173.24(f), closures on packagings must be so designed and closed that under conditions normally incident to transportation that there is no identifiable release of hazardous materials to the environment from the opening to which the closure is applied and the closure is leakproof and secured from loosening.

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Dirk Der Kinderen".

Dirk Der Kinderen
Chief, Standards Development Branch
Standards and Rulemaking Division

Baker

From: [INFOCNTR \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#)
Cc: [Hazmat Interps](#)
Subject: FW: Interpretation of 49 CFR Part 173
Date: Wednesday, June 2, 2021 3:31:29 PM

21-0061

Hi Alice,

Please see the below LOI request.

Let us know if you need anything else.

Regards,

-Breanna

From: Gunaratnam Rachael [mailto:rachael.gunaratnam@ntsb.gov]
Sent: Tuesday, June 1, 2021 3:55 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Cc: Lynum Sean <sean.lynum@ntsb.gov>
Subject: Interpretation of 49 CFR Part 173

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To the Hazardous Materials Information Center:

I am requesting a formal interpretation on the regulations for nurse tanks transporting anhydrous ammonia. The NTSB is currently investigating an anhydrous ammonia release from two nurse tanks while in transportation and would like further information on how the federal regulations apply.

Does 49 CFR Part 173 require the closure of liquid discharge valves on nurse tanks loaded with anhydrous ammonia while in transportation? It appears that 49 CFR Part 173.24(b) may require it, though it does not state it explicitly. If 49 CFR Part 173 does not require the closure of all liquid discharge valves, is it required anywhere else in the Code of Federal Regulations?

Thank you,

Rachael Gunaratnam

Hazardous Materials Accident Investigator
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