



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

March 28, 2023

Mr. Rex Railsback
Safety Consultant
DOT Training Solutions
P.O. Box 253111
Overland Park, KS 66225

Reference No. 22-0088

Dear Mr. Railsback:

This letter is in response to your July 29, 2022, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the testing of insulated Department of Transportation (DOT) specification MC 331 cargo tanks. Specifically, you ask whether previous Letter of Interpretation (LOI) No. 04-0221—issued on October 1, 2004—is still valid, and request information as to how insulated MC 330 and MC 331 cargo tanks could be exempt from compliance with the periodic test and inspection requirements found in Note 4 to § 180.407(c) or § 180.407(d)(1).

LOI No. 04-0221 discusses inspection requirements for MC 330, MC 331, and MC 338 cargo tanks in carbon dioxide, refrigerated liquid service. After reviewing LOI 04-0221, it is the opinion of this Office that the letter is still accurate and considered current.

In addition, nothing in § 180.407 exempts MC 330 or 331 cargo tanks from the requirements of § 180.407(c) Note 4 or § 180.407(d)(1). The compliance dates specified in § 180.407(c) require insulated MC 330 and 331 cargo tanks to undergo an internal visual inspection once every five years. Section 180.407(d) states that insulated cargo tanks that cannot be entirely externally inspected due to the insulation must be internally inspected in the areas where external inspection is precluded. Further, if the inside of the cargo tank is lined, coated, or designed to prevent access for an internal inspection, then the cargo tank must be hydrostatically tested.

In summary, while internal inspections are required every five years, either an internal inspection or a hydrostatic test must be conducted annually if insulation precludes a full external inspection.

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

Sincerely,

A handwritten signature in blue ink that reads "T. Glenn Foster". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

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

From: [INFOCNTR \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#)
Subject: FW: Ref. 180.407(c), note 4, 180.407(d) and insulated MC 331 Cargo Tanks
Date: Friday, August 26, 2022 2:28:11 PM

Hi Alice,

Please see the below interpretation request.

Let us know if you need anything.

Regards,

Josh

From: Rex Railsback <rex@dottrainingsolutions.com>
Sent: Friday, July 29, 2022 3:32 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Ref. 180.407(c), note 4, 180.407(d) and insulated MC 331 Cargo Tanks

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Ref. 180.407(c), note 4, 180.407(d) and insulated MC 331 Cargo Tanks

I respectfully request a written response, to the following questions.

Per 180.407(c), an insulated MC 331 cargo tank must have an external visual inspection annually. Additionally, an internal visual inspection would be required every five years, due to insulated MC 331's being excepted from the 1 year requirement and the five year requirement stating is applies to "all other cargo tanks, except MC 338". The 1 year section of the chart for internal visual inspections, sends you to "Note 4". Note 4 states "Insulated cargo tanks equipped with manholes or inspection openings may perform either an internal visual inspection in conjunction with the external visual inspection or a hydrostatic or pneumatic pressure-test of the cargo tank". Note 4, would leave one to believe that external areas of an insulated MC 331, that cannot be inspected during an external visual inspection, would require those hidden areas, to be internally inspected or perform a pressure test, to satisfy the annual external visual inspection requirements.

180.407(d)(1) states "Where insulation precludes a complete external visual inspection as required by paragraphs (d)(2) through (d)(6) of this section, the cargo tank also must be given an internal visual inspection in accordance with paragraph (e) of this section. If external visual inspection is precluded because any part of the cargo tank wall is externally lined, coated, or designed to prevent an external visual inspection, those areas of the cargo tank must be internally inspected. If internal

visual inspection is precluded because the cargo tank is lined, coated, or designed so as to prevent access for internal inspection, the tank must be hydrostatically or pneumatically tested in accordance with paragraph (g)(1)(iv) of this section. Those items able to be externally inspected must be externally inspected and noted in the inspection report.

PHMSA has issued several interpretations since December 2004, that more or less state, areas that cannot be inspected to the satisfaction of the Registered Inspector during the required external visual inspection, then those areas that cannot be externally inspected, must be inspected internally or a pressure test must be completed.

However, 04-0221, issued October 2004, for insulated MC 331 CTMV, in Carbon dioxide, refrigerated liquid service, states that the exception for the internal visual inspection for insulated MC 330, 331 or 338 cargo tanks, was not removed so insulated MC 331 cargo tanks would only be subject to 180.407(e) every five years. 04-0221 further implies, that the inspection report for the external visual inspection, will only have to list those items that were capable of being inspected during the annually required external visual inspection, without internally inspecting the hidden items.

Interpretation 04-0221 appears to be the only interpretation to state this and appears to be contradictory to all subsequent interpretations, ref., registered inspectors not being able to fully complete an external visual inspection, per 180.407(d), due to hidden area/components.

Is it still PHMSA's position, that 04-0221 is still a "current" interpretation? If so, can you please spell out the regulatory text, that exempts insulated MC 330, 331 cargo tanks, in Carbon dioxide, refrigerated liquid service and/or any insulated MC 330, 331 cargo tank and/or CTMV, from complying with 180.407(d)(1) and/or 180.407(c), Note 4.

Once again, I am respectfully requesting a written response to the above questions.

My contact information is below

Respectfully,

Rex C. Railsback

Safety Consultant

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