

From: [INFOCNTR \(PHMSA\)](#)
To: [Baker, Yul \(PHMSA\)](#)
Cc: [Hazmat Interps](#)
Subject: Letter of Interpretation Request - FW: Written Interpretation request
Date: Wednesday, January 28, 2026 12:26:54 PM

Hi Yul,

Please see the below interpretation request and attachments.

Let us know if you need anything.

Thanks,
Janaye

From: tom.forbes@puco.ohio.gov <tom.forbes@puco.ohio.gov>
Sent: Wednesday, January 28, 2026 9:57 AM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Written Interpretation request

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.

PHMSA Staff:

This is a request for a written interpretation on what appears to be a direct conflict between previous interpretation provided by PHMSA or RSPA and a recent interpretation by PHMSA.

On January 14, 2026, PHMSA issued LOI # 25-0035. In this interpretation the requester asked in Q-1 if you are unable to conduct the external visual inspection on an insulated MC 331 cargo tank are you required to conduct and internal visual inspection once a year. A-1 states yes, the cargo tank must also be given and internal visual inspection in accordance with 180.407(d)(1).

On October 1, 2004, in LOI # 04-0021 RSPA answered the question of test requirements on an insulated MC 331 and responded as shown in the table in 180.407(c) on the HMR, insulated CTMVs are excepted from the requirement

to have an annual internal visual inspection. Insulated MC 331 cargo tanks are required to have an internal visual inspection at least once every five years. The annual, partial external visual inspection and a leakage test performed in accordance with 180.407(h) fulfill the annual inspection and test requirements applicable to MC 331 CTMVs in carbon dioxide, refrigerated liquid service.

On July 31, 2006, in LOI # 06-0034 PHMSA answered the question regarding the applicability of an exception allowing cargo tank motor vehicles to undergo a partial external visual inspection and a leakage test to fulfill the annual test and inspection requirements applies to all materials being transported in insulated MC 330 and MC 331 cargo tank motor vehicles and in particular, to the transportation of pyrophoric materials. The answer is yes. This exception applies to all hazardous materials being transported in insulated MC 330 and MC 331 cargo tank motor vehicles. The annual, partial external visual inspection and a leakage test performed in accordance with 180.407(h) fulfill the annual inspection and test requirements applicable to insulated MC 330 and MC 331 cargo tank motor vehicles.

On January 30, 2004, in LOI # 03-0241 RSPA answered the question about the requirement for an internal annual inspection on an insulated MC 331 CTMV hauling chlorine. You are correct that under the HMR, as amended by the HM-213 rule, you need not perform an annual internal visual inspection of your insulated MC 331 CTMV in place of the annual external visual inspection.

The LOIs # 04-0021, 06-0034, and 03-0241 all seem to state for an insulated MC-331 CTMV you are required to conduct a partial external and leakage test annually. You are not required to conduct an internal test annually due to parts of the cargo tank not accessible for inspection due to insulation covering. This appears to be in direct conflict with LOI # 25-0035.

For your convenience I have attached all the interpretation discussed. Please clarify what the annual requirements are for an insulated MC 331 cargo tank where only a partial external visual is possible,.

Thank you for your continued assistance in interpreting the HMRs.

Respectfully,



Public Utilities Commission

Tom Forbes

Chief, Motor Carrier Enforcement

180 E Broad Street

Columbus, Ohio 43215

D: 614.644.0296 C: 614.519.2811

tom.forbes@puco.ohio.gov

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U.S. Department
of Transportation
**Research and
Special Programs
Administration**

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

JAN 30 2004

Ms. Carol Kaufman
Senior Environmental Specialist
Metropolitan Water District of
Southern California
Los Angeles, California 90012

Ref. No. 03-0241

Dear Ms. Kaufman:

This responds to your inquiry regarding the requirements for inspection and testing of MC-331 cargo tanks containing chlorine under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). This is a follow-up to your telephone conversation with Phil Olson of our Office of Hazardous Materials Technology regarding required inspection and testing requirements for DOT specification MC 331 cargo tank motor vehicles (CTMVs) as they relate to amendments adopted in a final rule published on April 18, 2003 [Docket HM-213, effective October 1, 2003].

You state that the Metropolitan Water District of Southern California (MWD), a public water provider, uses DOT specification MC 331 CTMVs in chlorine service. Annually, in accordance with §180.407, the MWD conducts a partial, visual external inspection of the steel cargo tank (insulation prevents a complete visual external inspection) and records the results in inspection reports. A visual internal inspection is not conducted concurrently, as every two years the cargo tanks are subjected to hydrostatic pressure testing and leakage tests. You ask if the annual, partial visual external inspection of an insulated MC 331 cargo tank used in chlorine service, combined with pressure and leakage testing every two years, complies with the requirements at §180.407(d).

Section 180.407 of the HMR contains the requalification requirements for DOT specification CTMVs. Paragraph (c) of this section includes a table that establishes test and inspection intervals for different types of CTMVs. Paragraphs (d) through (i) of this section describe how each required test and inspection must be performed. Section 180.407 must be read in its entirety in order to ascertain which tests and inspections are required for a specific CTMV.

On April 18, 2003, the Research and Special Programs Administration published a final rule [68 FR 19258; Docket HM-213; effective October 1, 2003] adopting a number of revisions to the HMR to update and clarify the regulations on the construction and maintenance of CTMVs. Paragraph (d)(1) of §180.407 was revised to provide the correct references for hydrostatic and pneumatic testing of cargo tanks, where a visual inspection is precluded because the cargo tank is lined, coated, insulated or designed so as to prevent access for external or internal inspection.



030241

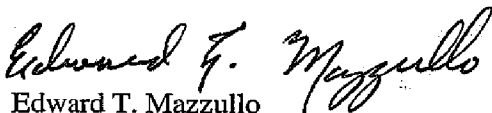
180 407

Paragraph (d) of § 180.407 sets forth requirements for the performance of an external visual inspection. Paragraph (d)(1) generally requires an internal visual inspection in accordance with paragraph (e) of § 180.407 in place of the external visual inspection where insulation precludes performance of the external visual inspection. The table in § 180.407(c) is consistent with paragraph (d)(1); in accordance with the table, insulated cargo tanks are required to have an internal visual inspection every year. Note, however, that MC 331 CTMVs are excepted from this requirement. Instead, MC 331 CTMVs are required to have an internal visual inspection every five years.

You are correct that under the HMR, as amended by the HM-213 final rule, you need not perform an annual internal visual inspection of your insulated MC 331 CTMVs in place of the annual external visual inspection. An annual, partial visual external inspection, combined with pressure and leakage testing performed every two years in accordance with paragraphs (c), (g), and (h) of § 180.407, satisfies the test and inspection requirements applicable to MC 331 CTMVs in chlorine service. We note that this test and inspection regimen includes an internal visual inspection as part of the pressure test. Taken together, the test and inspection procedures utilized by MWD assures frequent evaluation of the integrity of the cargo tank while minimizing atmospheric exposure that could accelerate corrosion (which could be a potential consequence of an annual visual internal inspection).

I hope this information is helpful. If we can be of further assistance, please contact us.

Sincerely,



Edward T. Mazzullo
Director, Office of Hazardous Materials Standards

Engrum
§ 180.407

Cargo Tanks
03-0241

Gorsky, Susan

From: Kaufman, Carol Y [cykaufman@mwdh2o.com]
Sent: Monday, September 22, 2003 4:24 PM
To: Gorsky, Susan
Cc: Ford, Rick; Guillory, Dan; Clark, John E
Subject: FW: Request for Concurrence Re: Inspection and Testing Requirements for DOT MC 331 Chlorine Cargo Tanks

Importance: High

Hi Susan,

Per our discussion earlier this morning, below is the original e-mail correspondence requesting concurrence regarding the inspection and testing requirements for DOT MC 331 Chlorine Cargo Tanks.

Thank you again for your attention to this matter. I look forward to hearing back from you. If you have any questions, please do not hesitate to contact me.

Carol Kaufman
(213) 217-6207

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

From: Kaufman, Carol Y
Sent: Tuesday, September 02, 2003 10:19 AM
To: 'philip.olson@rspa.dot.gov'
Cc: Clairday, John C; Clark, John E; Guillory, Dan; Ford, Rick; Beswick, Paul G
Subject: Request for Concurrence Re: Inspection and Testing Requirements for DOT MC 331 Chlorine Cargo Tanks

Hi Mr. Olson,

This is a follow-up to our August 25, 2003 telephone conversation regarding the required inspection and testing requirements for DOT MC 331 Cargo Tanks as they relate to the amendments adopted by the Department of Transportation (DOT), Research and Special Programs Administration (RSPA) on April 18, 2003.

As discussed, Metropolitan Water District of Southern California (MWD) is a public water provider and possesses in its fleet DOT MC 331 cargo tanks for chlorine service. Historically in accordance with the provisions of 49 Code of Federal Regulations (CFR), Section 180.407, we conduct a partial visual external inspection of the steel cargo tanks on an annual basis (insulation prevents a complete visual external inspection) and record the results on our inspection reports. A visual internal inspection is not conducted concurrently, as every two years the cargo tanks are subjected to hydrostatic pressure testing and leakage tests. This bi-annual testing provides the necessary safety check of tank integrity and the opportunity for a visual inspection of the internal area of the steel cargo tanks, while minimizing the frequency of atmospheric exposure which could accelerate corrosion (which could be a potential consequence of an annual visual internal inspection).

Prior to the April 18, 2003 amendments, the wording in 49 CFR Section 180.407 (d) specifically stated that; "Where insulation precludes external visual inspection, the cargo tank, other than an MC 330 or MC 331 cargo tank, must be given a visual internal inspection...". However, in the recent amendments the entire wording of this section was

modified, and in so doing, the wording excepting the MC 331 cargo tanks does not appear in the amended section. However, based on the inspection and testing provisions identified in the Section 180.407 (c) Table, it appears that the previous annual visual external inspection coupled with the bi-annual pressure testing continues to be a compliant practice. Additionally, a new requirement to conduct visual internal inspections of the MC 330 or MC 331 cargo tanks would have been a significant amendment, and therefore, would have been called out in the preamble to the specific regulatory changes in the Federal Register publication, which it was not.

Metropolitan is asking for your concurrence in our understanding of the inspection and testing requirements as they were amended on April 18, 2003. Specifically, it is our understanding that the annual partial visual external inspections for MC 331 cargo tanks, combined with pressure and leakage testing every two years continue to be in compliance with the 49 CFR Section 180.407 requirements.

Thank you for your attention in this matter. We look forward to hearing back from you regarding this issue. If you have any questions, please do not hesitate to contact me.

Carol Kaufman
Senior Environmental Specialist
Metropolitan Water District of Southern California
700 N. Alameda St.
Los Angeles, CA 90012
(213) 217-6207
FAX (213) 217-6700
cykaufman@mwqh2o.com



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

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

JUL 31 2006

Mr. Thomas P. Lynch
Vice President and General Counsel
National Tank Truck Carriers, Inc.
2200 Mill Rd.
Alexandria, VA 22314

Ref. No. 06-0034

Dear Mr. Lynch:

This is in response to your letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) regarding the applicability of an exception allowing cargo tank motor vehicles to undergo a partial external visual inspection and a leakage test to fulfill annual test and inspection requirements. You ask whether the exception applies to all materials being transported in insulated MC 330 and MC 331 cargo tank motor vehicles and, in particular, to the transportation of pyrophoric materials.

The answer is yes. The table in § 180.407(c) excepts insulated MC 330 and MC 331 cargo tank motor vehicles from the internal visual inspection requirement and this exception applies to all hazardous materials being transported in insulated MC 330 and MC 331 cargo tank motor vehicles. These cargo tank motor vehicles are required to have an internal visual inspection at least once every five years in conjunction with the pressure test. Because the insulation prevents a complete external visual inspection, those items able to be externally inspected must be inspected annually in accordance with § 180.407(d) and noted in the inspection report. The annual, partial external visual inspection and a leakage test performed in accordance with § 180.407(h) fulfill the annual inspection and test requirements applicable to insulated MC 330 and MC 331 cargo tank motor vehicles. Once the external visual inspection and leakage test have been successfully completed, the tank may be marked in accordance with § 180.415(b).

I hope this information is helpful. Please contact this office should you have additional questions.

Sincerely,

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



060034

180.407(c)



CLIFFORD J. HARVISON
PRESIDENT

NATIONAL TANK TRUCK CARRIERS, INC.

THE NATIONAL ORGANIZATION SERVING THE FOR-HIRE TANK TRUCK INDUSTRY

2200 MILL ROAD • ALEXANDRIA, VA 22314-4677
PHONE: 703/838-1960 • FAX: 703/684-5753

McIntyre
§180.407(c)
Cargo Tanks
06-0034

February 10, 2006

Mr. Edward Mazzullo
Director, Office of Hazardous Materials Standards
Pipelines and Hazardous Materials Administration
U.S. Department of Transportation
400 Seventh St., SW
Washington, DC 20590

SENT BY FAX: 202/366-3012

RE: Annual §180.407(c) Inspections for Insulated MC-330 and 331 Cargo Tank Motor Vehicles

Dear Mr. Mazzullo:

Enclosed please find a copy of a letter you wrote to Mr. R. J. McGrath with the Compressed Gas Association, dated October 1, 2004, in which you noted that HM 213 did not alter the exception granted to insulated MC 330, 331 and 338 cargo tanks in carbon dioxide, refrigerated liquid service. Due to both the impossibility of conducting a full external visual inspection because of the insulation and the hardship of conducting annual internal visual inspections, the exception allows for them to undergo a partial external visual inspection under §180.407(d) and a leakage test performed in accordance with §180.407(h) to fulfill annual test and inspection requirements.

Accordingly, NTTC respectfully asks whether that exception also applies to all insulated MC 330 and 331 cargo tank motor vehicles. NTTC has received inquiries from members specifically regarding applicability of this exception to pyrophoric transportation by means of an insulated MC 330 or 331.

NTTC notes that the exact same design characteristics that led the Administrator to grant the exception for insulated MC 330 and 331 cargo tank motor vehicles in carbon dioxide, refrigerated liquid service, apply equally to insulated MC 330 and 331 cargo tank motor vehicles in other product service, such as that for pyrophorics. Likewise, without the exception, the same attendant challenges of having to conduct more frequent internal visual inspections would also apply.

Thank you for consideration in this matter. If you have any questions about this request, or desire any information, please do not hesitate to contact me directly.

Sincerely,

A handwritten signature in cursive script that reads "Tom Lynch".

Thomas P. Lynch
Vice President and General Counsel



U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

January 14, 2026

Art Fleener
Fleener Consulting LLC
3741 Mathews Road
Ames, Iowa 50014

Reference No. 25-0035

Dear Mr. Fleener:

This letter is in response to your March 27, 2025 email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to cargo tanks. Specifically, your inquiry is related to the required frequency of the external and internal visual inspections of insulated and non-insulated MC 331 cargo tanks.

We have paraphrased and answered your questions as follows:

Q1. If you are unable to conduct the annual external visual inspection on an insulated MC 331 cargo tank, are you required to conduct an internal visual inspection once a year?

A1. Yes, for those areas of the cargo tank unable to be externally inspected. Each specification cargo tank must be tested and inspected as specified in § 180.407(c) and in accordance with § 180.407(d)(1), where insulation precludes a complete external visual inspection, the cargo tank must *also* (emphasis added) be given an internal visual inspection in accordance with § 180.407(d)(1).

Q2. If you are unable to conduct the annual external visual inspection on a non-insulated MC 331 cargo tank that has a coating, or vinyl wrap applied to the external shell, are you required to conduct an internal visual inspection once a year?

A2. Yes. 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 visually inspected in accordance with § 180.407(d)(1).

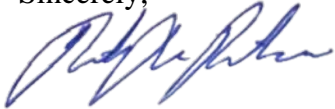
Q3. It is your understanding that PHMSA has required an internal visual inspection once every 5 years for insulated MC 331 cargo tanks and an internal visual inspection annually for non-insulated MC 331 cargo tanks that have wraps or other external coverings of the tank.

If this understanding is still accurate, why are non-insulated MC 331 cargo tanks with a coating or vinyl wrap required to conduct an internal visual inspection every year?

A3. Insulated and non-insulated MC 331 cargo tanks are not treated differently with regard to internal visual inspections. In both cases, a complete internal visual inspection is required once every five years as reflected in the table of § 180.407(c). The external visual inspection is required annually for MC 331 cargo tanks. For both cases in accordance with § 180.407(d)(1), if insulation precludes complete external visual inspection or if any portion of a cargo tank is externally covered (*i.e.*, lined, coated, or designed to prevent external visual inspection), then an internal visual inspection of those areas affected by the covering is required in conjunction with the external visual inspection for the remaining areas of the cargo tank wall. Because the interval for external visual inspection is annually, the interval for the partial internal visual inspection is also annually.

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 DerKinderen".

Dirk DerKinderen
Chief, Standards and Development Branch
Standards and Rulemaking Division

From: [Kelley, Shane \(PHMSA\)](#)
To: [Hazmat Interps](#)
Subject: Fw: Request interp
Date: Friday, March 28, 2025 3:01:06 AM

Please process accordingly.

From: art fleener <fleenerconsulting@yahoo.com>
Sent: Thursday, March 27, 2025 5:30:01 PM
To: Kelley, Shane (PHMSA) <shane.kelley@dot.gov>
Subject: Request interp

You don't often get email from fleenerconsulting@yahoo.com. [Learn why this is important](#)

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Shane:

Hope all is well with you, and you are surviving.

I would like clarification and for PHMSA to reconsider the current stance on doing an internal visual on when you cannot see the outside of the tank.

PHMSA has issued several interps over the years that for an insulated 330, 331 and 338 cargo tank that you are not required to do an internal visual inspection every year to satisfy the external visual and that we are only required to do the internal visual every 5 years, this is consistent with the regulations. In the 180.407 test and inspection table it tells us that we have to do an internal inspection every year for an insulated tank, except for a 330, 331 and 338, and that these tanks are required to be internally visually inspected every 5 years.

PHMSA also has issued several interps that tells us if we have a 331 cargo tank and we cannot see the outside of the tank due to wraps and even paint, then we have to do an internal visual as part of the external visual inspection every year. These interps tells us since we cannot see the actual outside of the tank as part of an external that we have to go inside, and IMO these interps are in conflict with the prior interps for an insulated tank.

PHMSA tells us in interps that if we have a 331 cargo tank with a spray on coating to help protect the tank the that we have to do an internal every year as part of the external visual. That same tank if it was insulated and we cannot see the outside of the tank we would only need to do the internal once every 5 years. IF that tank had any corrosion that started on the outside, we would most likely never find that issue by doing an internal visual inspection as the pressure in the tank would of most likely caused the tank to leak prior to any visual evidence seen on the inside.

1. For an insulated 331 are you required to do an internal visual at least once a year as part of the external visual since you are not able to see the tank proper?
2. For a non insulated 331 that has a coating, or a vinal wrap applied to the external shell where you can potentially see if there are any issues with the external portion of the cargo tank, are you required to do an internal annually as part of the external visual?
3. Historically PHMSA has answered question 1 that you are required to do an internal only once every 5 years and for question 2 that you would have to do the internal every year. If those answers are still current, please explain why when we have a non insulated 331 with a coating or vinal wrap and we can see more of the outside shell we are required to do an internal every year.

thanks

art

Fleener Consulting LLC.
515 291 9208
fleenerconsulting.com



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

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

OCT 1 2004

Mr. R. J. McGrath
Technical Manager
Compressed Gas Association, Inc.
4221 Walney Road, 5th Floor
Chantilly, VA 20151-2923

Reference No. 04-0221

Dear Mr. McGrath:

This responds to your August 23, 2004 letter regarding the requirements for inspection and testing of insulated MC-331 cargo tank motor vehicles (CTMVs) containing carbon dioxide, refrigerated liquid under § 180.407 of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). You expressed concern about your members having to perform annual internal visual inspections on their MC 331 CTMVs based on amendments to the HMR adopted in final rules published under Docket No. RSPA 98-3554 (HM-213) on April 18 and September 3, 2003.

As shown in the table in § 180.407(c) of the HMR, insulated MC 331 CTMVs are excepted from the requirement to have an annual internal visual inspection. This exception granted for MC 330, MC 331, and MC 338 cargo tanks was not removed under the HM-213 final rule. Insulated MC 331 CTMVs are required to have an internal visual inspection at least once every five years. Because the insulation prevents a complete external visual inspection, those items able to be externally inspected must be inspected annually in accordance with 180.407(d) and noted in the inspection report. The annual, partial external visual inspection and a leakage test performed in accordance with § 180.407 (h) fulfill the annual inspection and test requirements applicable to MC 331 CTMVs in carbon dioxide, refrigerated liquid service.

The HM-213 final rule amended the HMR to clarify the external visual inspection requirements for insulated cargo tanks other than the insulated MC 330, MC 331, and MC 338s. As amended, the HMR allows insulated cargo tanks equipped with manholes or inspection openings to have either an internal visual inspection in conjunction with a partial external visual inspection or a hydrostatic or pneumatic pressure test. See note 4 following the table in § 180.407(c) and paragraph (d)(1).

I hope this information is helpful. If we can be of further assistance, please contact us.

Sincerely,

for
Edward T. Mazzullo
Director, Office of Hazardous
Materials Standards



COMPRESSED GAS ASSOCIATION, INC.

4221 Walney Road, 5th Floor, Chantilly, VA 20151-2923

(703) 788-2700 ■ Fax: (703) 961-1831 ■ E-mail: cga@cganet.com ■ Web Site: www.cganet.com

August 23, 2004

Mr. Frits Wybenga
Research and Special Programs Administration
U. S. Department of Transportation
400 Seventh Street SW
Washington, DC 20590-0001

Mitchell
§180.407 (c)
Cargo Tanks
04-0221

Subject: 49 CFR 180.407
Gentlemen:

The Compressed Gas Association (CGA) seeks an opportunity to discuss with the DOT an alternative to the requirements for internal and external visual inspections of MC 331 trailers which deliver carbon dioxide refrigerated liquid (CO₂) found at 180.407 (C) of 49 CFR specifically with regard to subsection (d) as revised by HM213. CGA believes regulatory changes to visual internal requirements promulgated in DOT Docket HM-213, which includes CO₂ trailers with all other MC331 trailers, places an undue burden on the industry and is unnecessary that due to the unique physical characteristics of CO₂.

MC-331 cargo tanks are required to undergo periodic testing and requalification in accordance with 180.407 (C). Pressure testing is required every 5 years and may be done either pneumatically or hydrostatically at 1.5 times the design pressure of the vessel. Prior to any pressure testing the inner vessel is required to undergo a visual inspection. Annual visual internal inspections are required for "All insulated cargo tanks except MC331". CO₂ trailers are MC331 and, thus, a yearly internal inspection is required. Docket HM-213 inserted the words "see note 4" to the table. Regrettably, the CGA did not have the opportunity to comment on the wording inserting note 4 into the table, as this was not in the notice of proposed rule making.

The CGA is concerned that the additional inspections required by having a yearly internal inspection causes risk to personnel without an additional level of safety. Additionally, internal inspections on a yearly basis do not provide any higher level of safety as the product is non-corrosive and the tank is outwardly protected by insulation. Personnel exposure to risk will increase by a factor of five throughout the industry with the number of entries into a confined space. Also, trailer purity and cleanliness is lost as opening the unit exposes the internal surfaces to moisture, which adversely affects the food grade quality of the product. Trailers returning to

service must be certified pure before filling. Internal inspections breed impurities into a sealed system subjecting the carrier and customer to expensive gas chromatograph testing. In lieu of performing this visual internal inspection, a shipper may choose to conduct pneumatic or hydraulic pressure testing on a yearly basis. Yearly exposure of testing personnel to extremely high energy levels created during pneumatic pressurization (necessary to protect product purity) is dangerous. A typical CO2 vessel pressurized to 1.5 the MAWP has approximately 170 million ft-lbs of potential energy.

The CGA operates a fleet of 3500 trailers within the CO2 industry. Through the years the industry has taken hundreds of trailers apart restoring the foam insulation and replacing the outer skin. We have examined bare vessels both inside and outside and have seen little or no appreciable deterioration. By imposing yearly testing a cost of \$2000 per trailer per year will be seen by all carriers. Lost product and purging cost will be \$1000 per trailer. In addition a trailer must be taken out of service for a minimum of three days during the year. For an average fleet of 400 trailers, an additional \$1,200,000 of maintenance would be required along with \$240,000 for rental to make up lost equipment.

In conclusion, the CGA wishes to discuss with DOT personnel an exclusion from the annual visual internal inspection requirements. We feel reviewing the product properties with industry experts and construction details with engineering and repair specialists would provide a better understanding of the CO2 industry in general. This we hope will lead to an informed decision about an alternative to annual internal visual inspection that provides an equivalent level of safety for the CO2 industry.

Very Truly Yours,
COMPRESSED GAS ASSOCIATION

A handwritten signature in black ink, appearing to read 'R.J. McGrath', with a long horizontal flourish extending to the right.

R.J. McGrath
Technical Manager