



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

June 29, 2020

Arthur L. Fleener  
Fleener Consulting LLC  
3741 Mathews Road  
Ames, IA 50014

Reference No. 20-0038

Dear Mr. Fleener:

This letter is in response to your April 29, 2020, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to MC 331 cargo tanks. Specifically, you seek clarification regarding external visual inspections of MC 331 cargo tanks that have been treated on the lower 1/3 of the cargo tank with a product commonly known as “rock guard.” You note that, similar to paint, “rock guard” is sprayed directly onto the unpainted cargo tank to provide a tough and scratch resistant surface that protects the cargo tank from rust and corrosion.

We have paraphrased and answered your questions as follows:

- Q1. You ask whether an MC 331 cargo tank that has been treated with “rock guard” would require a yearly internal visual inspection as part of the external visual inspection.
- A1. Section 180.407(d)(1) states, “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.” Therefore, if any portion of a cargo tank is covered with an external lining (e.g., a vinyl wrap) and/or coated (e.g., with paint or rock guard) in such a manner that prevents the proper external visual inspection as described in § 180.407(d)(1), then an internal visual inspection of those areas affected by the paint and/or coating would be required in conjunction with the external visual inspection for the remaining areas of the cargo tank wall.
- Q2. If the answer to Q1 is yes, you ask how an MC 331 cargo tank treated with “rock guard” is different than a regular painted cargo tank.
- A2. As stated in A1, if a 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. As a result, for the purposes of performing the external visual inspection as described in § 180.407(d), both paint and “rock guard” are regarded as coatings and prompt an internal inspection on cargo tanks when they prevent an external inspection.

Q3. You ask whether a cargo tank that has been treated with “rock guard” and that is required to have a yearly internal visual inspection as part of the external visual inspection would still require the internal visual inspection if the “rock guard” was not applied to the welded joints.

A3. Please see A1 and A2.

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:** [Foster, Glenn \(PHMSA\)](#)  
**To:** [Dodd, Alice \(PHMSA\)](#)  
**Subject:** FW: Request for guidance  
**Date:** Wednesday, April 29, 2020 10:13:24 AM  
**Attachments:** [rock guard interp request.pdf](#)

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**From:** art fleener [mailto:[fleenerconsulting@yahoo.com](mailto:fleenerconsulting@yahoo.com)]  
**Sent:** Wednesday, April 29, 2020 9:53 AM  
**To:** Foster, Glenn (PHMSA) <[Glenn.Foster@dot.gov](mailto:Glenn.Foster@dot.gov)>  
**Cc:** Kelley, Shane (PHMSA) <[shane.kelley@dot.gov](mailto:shane.kelley@dot.gov)>  
**Subject:** Request for guidance

Glenn

See the attached file for a guidance request on external visual inspections for a cargo tank.

If you have any questions please let me know.

Thanks

art

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April 29, 2020

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

Dear Mr. Foster:

We would like to seek clarification regarding external visual inspections on MC 331 cargo tanks that have what is commonly known as “rock guard” sprayed on the lower 1/3 of cargo tank. Rock guard is a treatment that is sprayed on the cargo tank not unlike paint.

Rock guard provides a tough and scratch resistance surface and protects the tank from rust and corrosion.

Rock guard is sprayed directly onto the unpainted cargo tank. The rest of the cargo tank is painted as normal.

We are seeking guidance if cargo tanks that have the rock guard treatment requires an internal visual inspection as part of the external visual inspection.

Our thickness testing of the spray on rock guard shows that it has a thickness of between 9 mm and 13 mm. Our thickness testing of the paint commonly used on MC 331 cargo tanks shows that the paint is between 16 mm and 18 mm thick.

Based on our experience if there is corrosion under the rock guard a rust bubble will be visible similar to a rust bubble under paint. It is not uncommon to have a minimum shell thickness for these tanks of over 0.40 inches. If there is corrosion between the rock guard and the cargo tank shell, an internal visual inspection will not show this corrosion.

It is our belief that cargo tanks with treatments like rock guard would simply be tested and inspected as any painted cargo tank would be.

1. For a cargo tank that has rock guard sprayed on the tank, would this treatment require the tank to have an internal visual inspection yearly as part of the external visual inspection?



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2. If the answer is yes to question #1 how is this any different then a regular painted tank?
3. If a tank has the rock guard treatment and if it is required to have an internal visual annually as part of the external visual inspection if the rock guard was not applied to the welded joints would it still require an internal visual inspection annually?

Sincerely,

Arthur L. Fleener