



U.S. Department
of Transportation

1200 New Jersey Avenue, SE
Washington, DC 20590

**Pipeline and Hazardous
Materials Safety
Administration**

January 17, 2023

Larry Loman
Director, Engineering
AllTranstek, LLC
1101 W. 31st Street, Suite 200
Downers Grove, IL 60515

Reference No. 22-0094

Dear Mr. Loman:

This letter is in response to your September 7, 2022, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to structural integrity inspections and testing for rubber-lined DOT 111A100W5 tank cars that were qualified for service by a Canadian tank car facility. In your email, you state that these tank cars were constructed with exterior heater coils that cover the tank shell butt welds and that fact complicates the ability to inspect and test the structural integrity of the tank shell butt welds in accordance with § 180.509(e)(1)(iii). You further state that it is your understanding that this is not required for rubber-lined tank cars with reinforced tank shell butt welds until such time the lining is removed in accordance with § 180.509(e)(3). You ask whether the heater coils that cover the tank shell butt welds would allow for the butt welds to be treated as reinforced tank shell butt welds, thereby only requiring inspection at the time of lining removal or application.

The answer is no, having heater coils that cover the tank shell butt welds would not constitute reinforced tank shell butt welds. However, this fact would not itself require the tank cars owner to cut the heater coils to allow for inspection and testing of the tank shell butt welds within two (2) feet of the bottom longitudinal centerline. As stated in § 180.509(e)(1)(iii), the tank shell butt welds must be tested *unless* the tank car owner can determine by analysis—e.g., finite element analysis, damage-tolerance analysis, or service reliability assessment—that the structure will not develop defects that reduce the design level of safety and reliability or fail within its operational life or prior to the next required inspection. Please note the tank car owner must also maintain all documentation used to make such determination at its principal place of business and make the data available to the Federal Railroad Administration or an authorized representative of the Department upon request.

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

Sincerely,

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

From: [INFOCNTR \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#); [Hazmat Interps](#)
Subject: FW: 49 CFR 180.509(e)(3) Interpretation Request
Date: Friday, September 16, 2022 2:05:49 PM

Hi Alice and team,
Please see the following LOI request. They included their mailing address in a separate email. Thank you.
Rachel (HMIC)

From: Larry Loman <loman@alltranstek.com>
Sent: Thursday, September 8, 2022 2:47 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Cc: Dave Ronzani <ronzani@alltranstek.com>
Subject: RE: 49 CFR 180.509(e)(3) 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.

Larry Loman
AllTranstek
1101 W 31st Street
Suite 200
Downers Grove, IL 60515

Thank you and let me know if you need anything else.
Larry



Larry Loman
Director, Engineering
AllTranstek, LLC
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loman@alltranstek.com



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From: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Sent: Thursday, September 8, 2022 11:41 AM
To: Larry Loman <loman@alltranstek.com>
Cc: Dave Ronzani <ronzani@alltranstek.com>
Subject: RE: 49 CFR 180.509(e)(3) Interpretation Request

Dear Larry,

We have received your request for a written letter of interpretation regarding the hazardous materials

regulations (49 CFR Parts 171-180). The hazardous materials regulations are available at the following URL:

<https://www.phmsa.dot.gov/phmsa-regulations>

However, before we can submit your request for processing, please respond to this email with:

- Physical Mailing Address

Sincerely,

Rachel, Hazardous Materials Specialist

An e-mail response from this office is considered informal guidance. Formal guidance may be requested in accordance with 49 CFR 105.20. <https://www.phmsa.dot.gov/standards-rulemaking/hazmat/hazardous-materials-information-center>

From: Larry Loman <loman@alltranstek.com>
Sent: Wednesday, September 7, 2022 5:36 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Cc: Dave Ronzani <ronzani@alltranstek.com>
Subject: 49 CFR 180.509(e)(3) Interpretation Request

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AllTranstek has a customer shipping Sodium Hypochlorite (Bleach) in DOT 111A100W5 tank cars with a qualified interior rubber lining installed in 2012. Structural integrity inspections are due this year per 49CFR180.509(e) and the subject jacketed cars have exterior heater coils. Twenty (20) of these cars were qualified by a Canadian tank car facility, so Transport Canada was contacted about the inspection of the tank shell butt welds under the exterior heater coils.

Shaun Singh of Transport Canada has indicated that the heater coils are not to be cut out for the sole purpose of structural integrity inspection. He also stated that if any tank butt shell welds within 24 inches of the bottom longitudinal centerline are covered by exterior heater coils, these welds still need to be inspected from the interior of the tank unless lined as per clause [9.5.7.4](#) (TP14877).

[9.5.7.4](#) In the case of tank cars with a lining, the inspection requirements of clause 9.5.7.2.c do not apply to a tank shell butt weld covered on the outside by a reinforcing plate or any other structural element welded to the tank shell until the time of lining removal or application.

The email request and response from Shaun Singh of Transport Canada are attached.

180.509(e)(1)(iii) requires inspection of the tank shell butt welds within 2 feet of the longitudinal centerline. Similar to clause [9.5.7.4](#) of TP14877, 49 CFR 180.509(e)(3) states:

The inspection requirements of paragraph (e)(1)(iii) of this section do not apply to reinforced tank shell butt welds until the time of lining removal or application for tank cars with an internal lead,

glass, or rubber lining.

At the time of lining replacement, the tank shell butt welds will be inspected from the tank interior using the visual and/or ultrasonic inspection method(s). In between lining replacements, during structural integrity inspections, the welds not covered by the heater coils will be inspected from the exterior through inspection ports cut in the jacket using the visual and/or remote visual inspection method(s).

Cutting the heater coil to inspect these welds under the coils and the coil attachment fillet welds could do more harm than good because these tank shell butt welds are not known to exhibit cracking or other defects from stress.

Question: These cars will be operating or may be qualified in the United States under 49CFR, so can the heater coil over a tank shell butt weld be treated like a "reinforced tank shell butt weld" as permitted by Transport Canada and not be cut/removed for inspection?

Thank you,
Larry



Larry Loman
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loman@alltranstek.com



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