



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, D.C. 20590

Ms. Christina Kurtz  
Manager, Regulations and Packaging  
Health, Environment and Safety  
Arkema, Inc.  
900 First Avenue, Building #2  
King of Prussia, PA 19406-1308

MAR 23 2015

Ref. No. 14-0117

Dear Ms. Kurtz:

This responds to your June 10, 2014 request for clarification of the rear-end protection requirements for cargo tanks under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you request clarification of rear-end tank protection requirements based on the design requirements of § 178.345-8(d)(1).

The rear-end cargo tank protection device must be designed so that it can deflect at least 6 inches horizontally forward with no contact between any part of the cargo tank motor vehicle which contains lading during transit and with any part of the rear-end protection device, or with a vertical plane passing through the outboard surface of the protection device. If the piping is not in the horizontal plane of the bumper, then the 6 inch standard must be measured to a vertical plane passing through the outboard surface of the device. Furthermore, we expressed concern regarding the drain lines from the piping in that they are clearly in the horizontal plane of the bumper. Please be aware that drain lines from piping must also be in compliance with § 178.345-8(d)(1).

I hope this answers your inquiry. If you need additional assistance, please contact this Office at (202) 366-8553.

Sincerely,

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

**Drakeford, Carolyn (PHMSA)**

Boothe  
§ 178.345-8 (d)  
Cargo Tanks  
14-0117

**From:** INFOCNTR (PHMSA)  
**Sent:** Tuesday, June 10, 2014 12:34 PM  
**To:** Drakeford, Carolyn (PHMSA)  
**Subject:** FW: Rear End Protection for cargo tanks 178.345-8(d)  
**Attachments:** Carogtankrearendprotectionsketch.pdf; Compliance with 178.345-8(d).ppt

Hi Carolyn,

This caller requested we submit this e-mail as a formal letter of interpretation.

Thanks,

Victoria

**From:** Christina KURTZ [<mailto:christina.kurtz@arkema.com>]  
**Sent:** Tuesday, June 10, 2014 10:53 AM  
**To:** INFOCNTR (PHMSA)  
**Subject:** Rear End Protection for cargo tanks 178.345-8(d)

One of Arkema Inc. cargo tanks was stopped by state police and given a warning. The policeman stated the rear discharge pipes are less than 6" from the rear protection. They were only 3 1/4". Thus, claiming we violated 49CFR 178.345-8(d).

We contend that we were not in violation based on the second part of 178.345-8(d)(1):

(d) *Rear-end tank protection.* Each cargo tank motor vehicle must be provided with a rear-end tank protection device to protect the cargo tank and piping in the event of a rearend collision and reduce the likelihood of damage that could result in the loss of lading. Nothing in this paragraph relieves the manufacturer of responsibility for complying with the requirements of § 393.86 of this title and, if applicable, paragraph (b) of this section. The rear-end tank protection device must conform to the following requirements:

(1) The rear-end cargo tank protection device must be designed so that it can deflect at least 6 inches horizontally forward with no contact between any part of the cargo tank motor vehicle which contains lading during transit and with any part of the rear-end protection device, **or with a vertical plane passing through the outboard surface of the protection device.**

Please see attached sketch of our trailers rear end.

Please confirm that we are correct.

Regards,

**Christina KURTZ**

Manager of Regulations and Packaging  
Health, Environment, and Safety  
610-205-7417



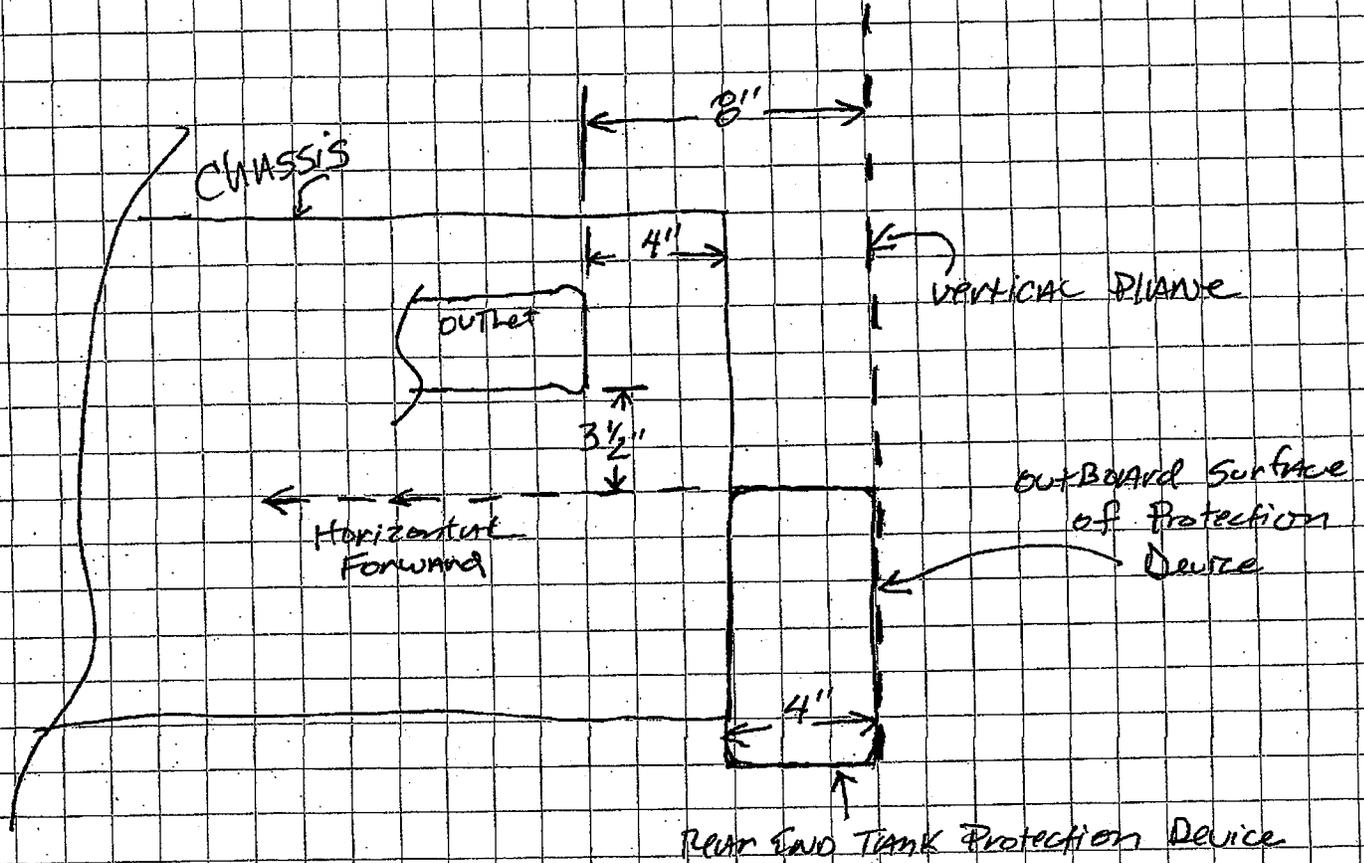
900 First Ave.  
Building #2  
19406-1308 King of Prussia, PA  
USA  
[christina.kurtz@arkema.com](mailto:christina.kurtz@arkema.com)

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Thank you.



THE METALS COMPANY



178.345-8 (d)(1)

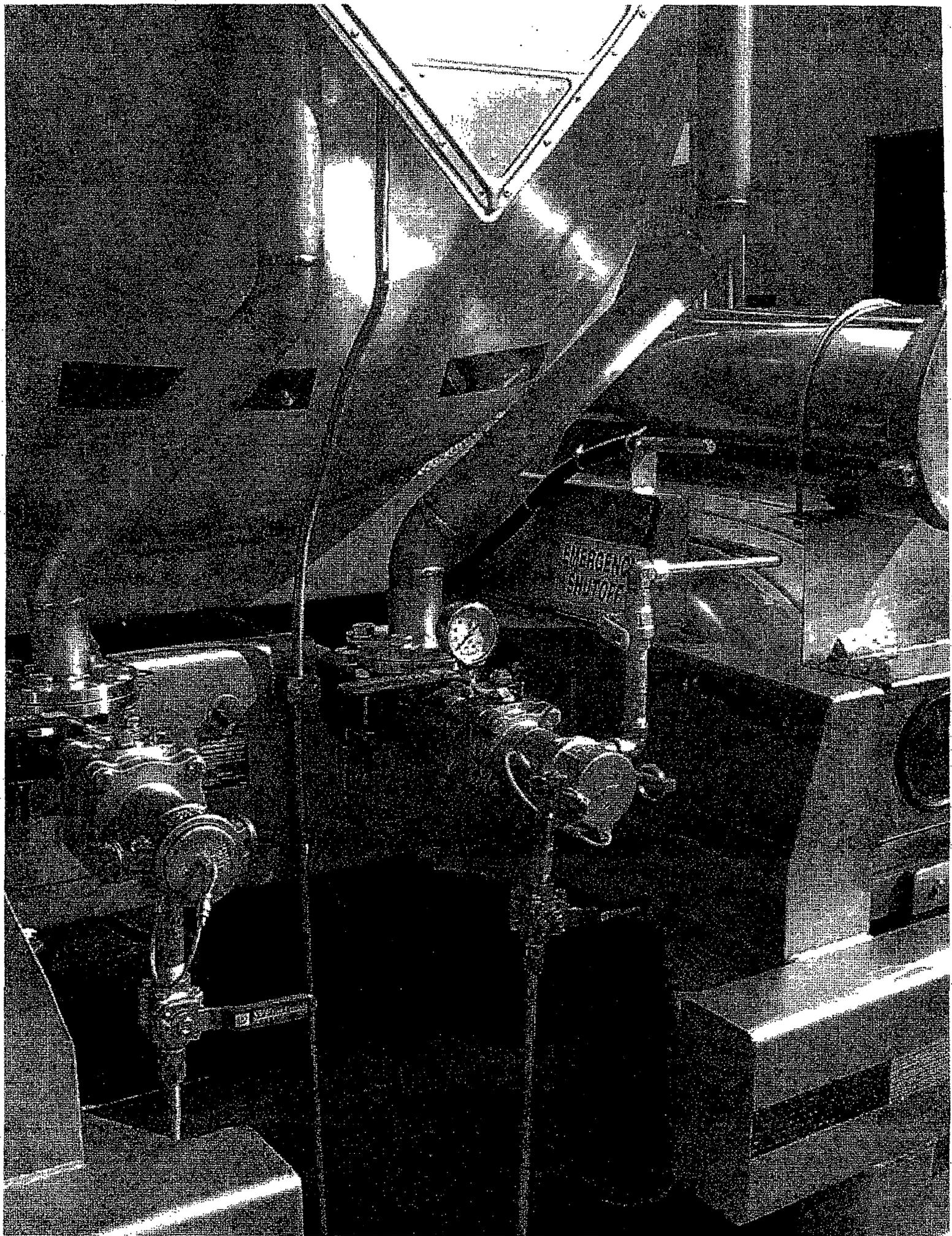
... ) or with a vertical plane passing through the outboard surface of the protection device.

YOUR SOURCE FOR:  
CNC MILLING  
PUNCHING  
CNC FLAME-CUT AND PLASMA PROFILE BURNING

DRILLING  
FORMING  
TAPPING  
SHEARING

SAWING  
MITER SAWING  
LASER

PLASMA PUNCH



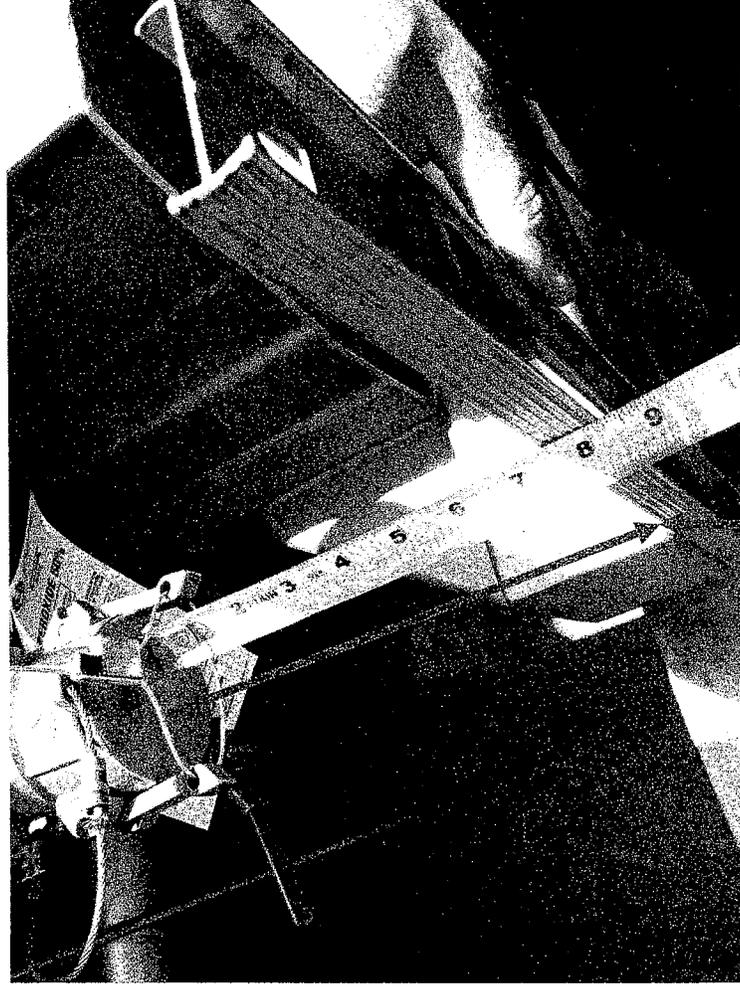
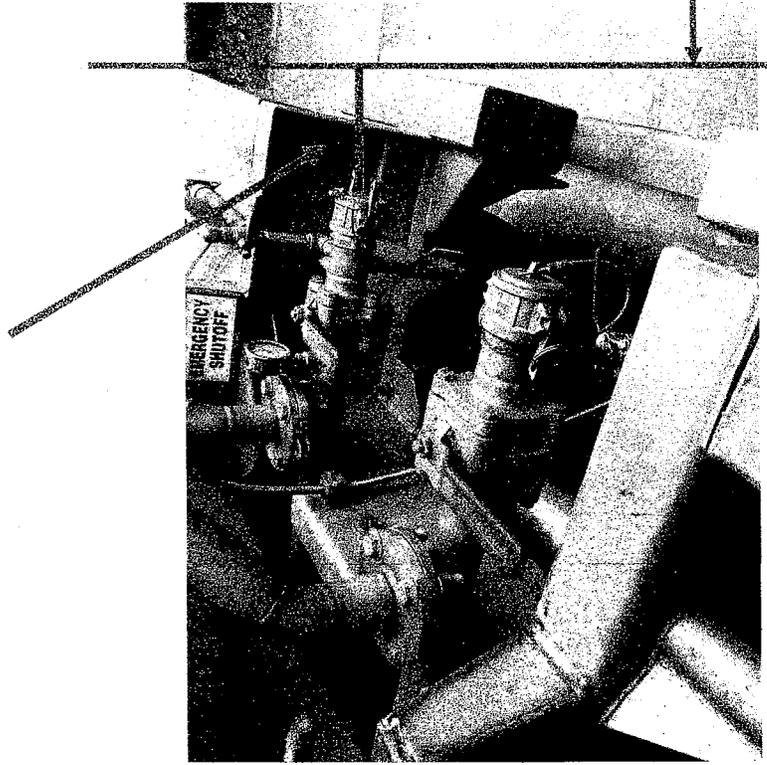
**178.345-8(d) Rear-end tank protection:**

Each cargo tank motor vehicle must be provided with a rear-end tank protection device to protect the cargo tank and piping in the event of a rear-end collision and reduce the likelihood of damage that could result in the loss of lading....

The rear-end tank protection device must conform to the following requirements:

- (1) The rear end cargo tank protection device must be designed so that it can deflect at least 6 inches horizontally forward with no contact between any part of the cargo tank which contains lading during transit and with any part of the rear-end protection device, **OR** with a vertical plane passing through the outboard surface of the protection device.

Horizontal Plane



Must be at least 6 inches

Vertical plane placed on the outboard surface of the protection device

