U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

SEP 1 2 2019

Robbie Dunn, P.E.
Westmor Industries, LLC
3 Development Drive
Morris, MN 56267

Reference No. 19-0025

Dear Mr. Dunn:

This letter is in response to your March 4, 2019, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the transportation of propane in a Specification MC331 cargo tank motor vehicle (bobtail). You describe a scenario where for propane deliveries made to customers, the driver must back into unfamiliar locations to complete the delivery and there are safety implications due to limited visibility and blind spots. As such, you are considering mounting a reel to the front of the bobtail chassis, which during transportation, will contain a residue of less than 10 gallons of propane in the piping and hose. Furthermore, you state that due to chassis variations or lack of chassis structure at the front of the bobtail chassis, you want to avoid installing a protection device.

You ask whether your configuration of piping, the internal valve, a secondary valve, and shear section is enough isolation from the cargo tank to consider the approximate 10 gallons of residual propane in the reel and piping to be independent from the bulk package (e.g., separate packaging).

The answer is no. Although the hose and piping used for loading and unloading a Specification MC 331 cargo tank is subject to the packaging specification, the hose and piping are not authorized to contain hazardous materials during transport. The propane in the hose and piping must be removed to the fullest extent practicable upon completion of loading or unloading the cargo tank.

Furthermore, although there is no restriction against mounting the hose reel and piping to the front of the MC 331 chassis, in accordance with § 178.337-10(a), all valves, fittings, pressure relief devices, and other accessories to the cargo tank must be protected against damage caused by collision with other vehicles or objects. Moreover, in accordance with § 178.337-10(f)(2), each internal self-closing stop valve, excess flow valve, and check valve must be protected by a

shear section or other sacrificial device and the sacrificial device must be located in the piping system outboard of the stop valve and within the accident damage protection device to prevent any accidental loss of lading. Based on the information and attachments provided, your design would not meet the accident damage protection requirements prescribed in § 178.337-10.

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

Baker
19-0025

Dodd, Alice (PHMSA)

From: Stevens, Michael (PHMSA)
Sent: Monday, March 04, 2019 9:53 AM
To: Robbie Dunn
Cc: Foster, Glenn (PHMSA); Hazmat Interps
Subject: RE: Code compliance for new product

Good Morning Mr. Dunn,

I will have your request for compliance verification entered into our system. It will be evaluated by our engineering department and a written response will be provided to you.

Sincerely,

Michael Stevens

From: Robbie Dunn [mailto:robbie.dunn@westmor-ind.com]
Sent: Monday, March 04, 2019 9:25 AM
To: Stevens, Michael (PHMSA) <michael.stevens@dot.gov>
Subject: Code compliance for new product

Michael, I'm looking for some guidance on a new product that we're developing to help our customers deliver Propane safer on an MC331 bobtail. I wanted to send you some background information and some diagrams to look at, then I was hoping to call you or if your not the correct contact that you could point me in the right direction. If it works better I'm willing to meet in person also.

The intent of the design is for public safety. When propane deliveries are made the operator has to back into an unknown location for the delivery. When backing up you have safety concerns with the limited visibility and blind spots. We've been selling backup camera's to help, but they get dirty and hard to see out of, and the screens are small. We're looking at mounting a reel to the front of the bobtail, in much the same manner as you might see on a fire truck. I've attached a few diagrams illustrating the concept. We've calculated less than 10 gallons of product in the piping and reel. Due to chassis variations, lack of chassis structure at the front we'd like to avoid putting a protection device around the reel. We believe it is acceptable to have up to 119 gallons of a hazmat product and not be considered bulk. We believe the question is what is needed to isolate the product remaining in the reel and piping from the rest of the bulk product, for it to be looked at on it's own. Would DOT consider the internal valve on the tank along with a secondary valve followed by a shear section be enough isolation to consider the 10 gallons independently? If not I wan't to explore other options.

I would like to talk to you or someone on this design idea, if you are the correct person to talk to what would be the best number to reach you at?

Regards,

--
Robbie Dunn, P.E.

Chief Engineer

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3 Development Drive
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United States

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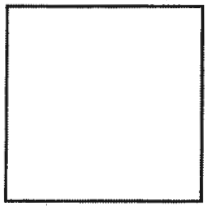
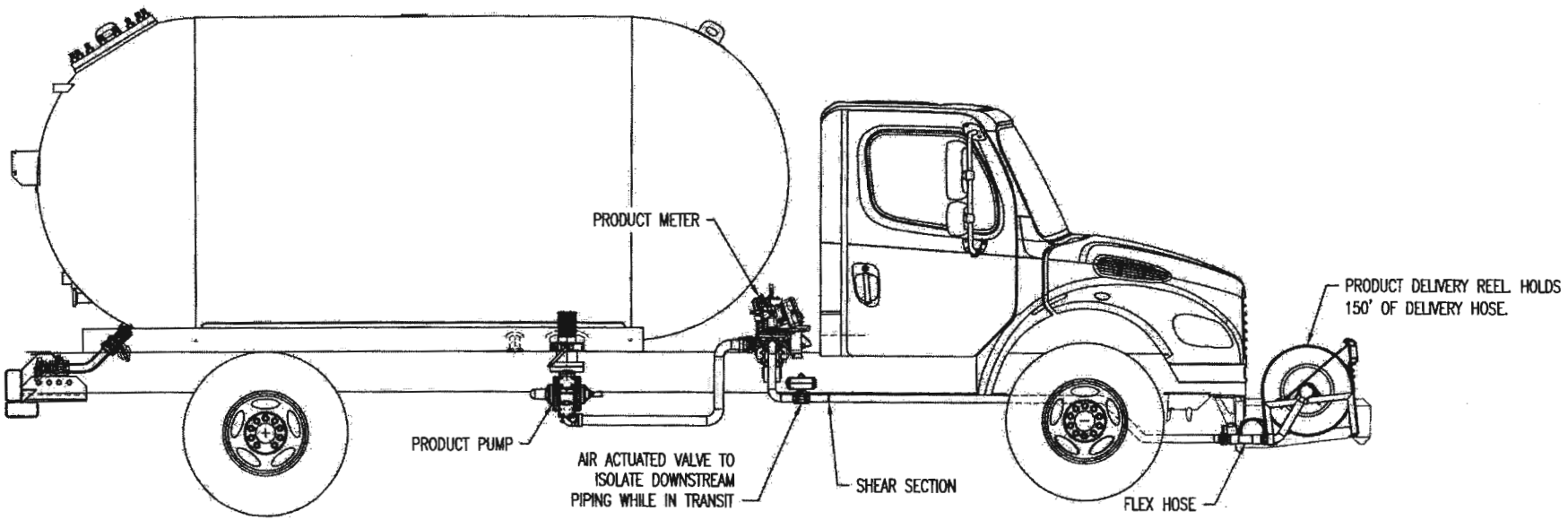
E: robbie.dunn@westmor-ind.com



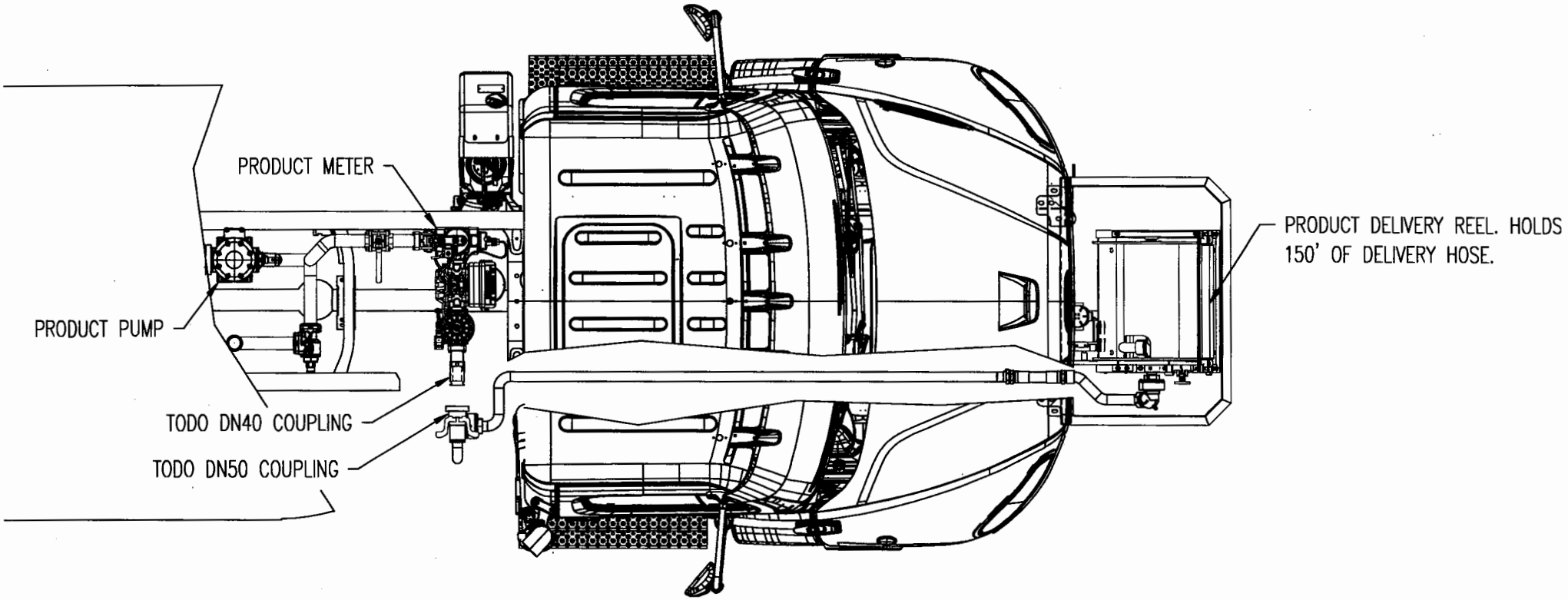

WESTMOR

13' OF 1.5 PIPING = 1.37 GALLONS
150' OF 1" HOSE = 6.12 GALLONS
PRODUCT IN REEL = 1 GALLONS



THERE WILL BE UP TO 10 GALLONS OF LIQUID PETROLEUM DOWN STREAM OF THE ISOLATION VALVE IN THE PIPING AND DELIVERY HOSE

THE FRONT DELIVERY REEL WILL ALLOW DRIVERS TO SAFELY PULL INTO DRIVEWAYS RATHER THAN BACKING INTO DRIVEWAYS WITH LIMITED VISIBILITY.



THERE WILL BE UP TO 10 GALLONS OF LIQUID
PETROLEUM DOWN STREAM OF THE DRY BREAK COUPLER
IN THE PIPING AND DELIVERY HOSE

THE FRONT DELIVERY REEL WILL ALLOW DRIVERS TO SAFELY PULL
INTO DRIVEWAYS RATHER THAN BACKING INTO DRIVEWAYS WITH
LIMITED VISIBILITY.