



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

December 10, 2020

Aris Antoniou
Gold Tank Inspection Service Inc.
P.O. Box 5638
Kingwood, TX 77325

Reference No. 20-0059

Dear Mr. Antoniou:

This is in response to your July 29, 2020, letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to United Nations (UN) portable tanks. Specifically, you describe a scenario in which an internal stop-valve on a UN portable tank has no spring and the valve must be closed by manually turning a lever.

We have paraphrased and answered your questions as follows:

Q1. You ask whether the internal stop-valve on the bottom discharge outlet of a UN portable tank must be self-closing or if it may be manually operated by turning a lever.

A1. Except as provided in 49 CFR § 178.275(d)(2), every bottom discharge outlet on a UN portable tank must be equipped with three serially fitted and mutually independent shut-off devices. The design of the equipment must include a self-closing internal stop-valve, among other requirements. While a spring-loaded, valve is the most common type of self-closing internal stop-valve, this design type is not specified in 49 CFR § 178.275(d)(3). However, any valve which closes independently without human operation, such as turning a lever, is considered “self-closing.”

Q2. You ask whether the presence of a lining changes the applicability of the requirements in 49 CFR § 178.275(d)(3).

A2. No. The requirements for bottom discharge outlets are the same for lined and unlined UN portable tanks.

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

Sincerely,

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



29-July-2020

Associate Administrator for Hazardous Materials Safety
Pipeline and Hazardous Materials Safety Administration,
US Department of Transportation, East Building,
1200 New Jersey Avenue SE,
Washington DC 20590 – 0001

Attn: Standards and Rulemaking [PHH-10]

Subject: Request for interpretation

Dear Sir or Madam:

We request clarification (via a letter of interpretation) of a subject relating to the bottom discharge internal valve on a UN portable tank.

49CFR178.275(d)(3) stipulates that the internal valve must be **self-closing**. This safety feature is normally accomplished by having a spring-loaded valve so that, when the handle is unlatched, the spring closes the valve rapidly. Two photographs of such a valve are below.

We have seen tanks where the internal valve has no spring and the valve must be closed by manually turning a lever. Photographs of this arrangement are below. This arrangement has been seen on tanks with an internal lining. We do not see where the presence of a lining changes the requirements of 49CFR178.275(d)(3).

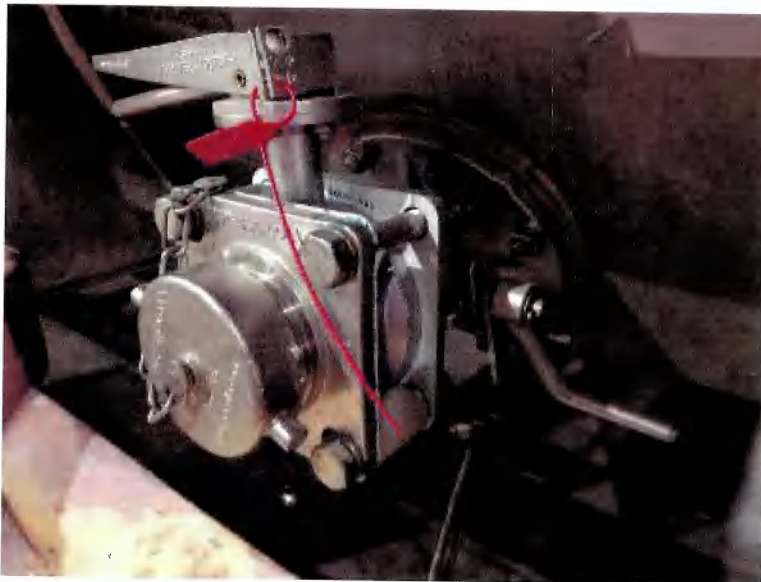
We would like to know if this manual arrangement complies with the referenced regulation.

Sincerely,



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Aris Antoniou
Gold Tank Inspection Service Inc.
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PHOTOGRAPHS of TYPICAL SPRING-LOADED INTERNAL FOOTVALVE



PHOTOGRAPHS of MANUALLY OPERATED INTERNAL VALVE



EXCERPT FROM 49CFR178.275(d)(3)

(3) Except as provided in paragraph (d)(2) of this section, every bottom discharge outlet must be equipped with three serially fitted and mutually independent shut-off devices. The design of the equipment must include:

(i) A **self-closing internal stop-valve**, which is a stop-valve within the shell or within a welded flange or its companion flange, such that:

(A) The control devices for the operation of the valve are designed to prevent any unintended opening through impact or other inadvertent act;

(B) The valve is operable from above or below;

(C) If possible, the setting of the valve (open or closed) must be capable of being verified from the ground;

(D) Except for portable tanks having a capacity less than 1,000 liters (264.2 gallons), it must be possible to close the valve from an accessible position on the portable tank that is remote from the valve itself within 30 seconds of actuation; and

(E) The valve must continue to be effective in the event of damage to the external device for controlling the operation of the valve;

(ii) An external stop-valve fitted as close to the shell as reasonably practicable;

(iii) A liquid tight closure at the end of the discharge pipe, which may be a bolted blank flange or a screw cap; and

(iv) For UN portable tanks, with bottom outlets, used for the transportation of liquid hazardous materials that are Class 3, PG I or II, or PG III with a flash point of less than 100 °F (38 °C); Division 5.1, PG I or II; or Division 6.1, PG I or II, the remote means of closure must be capable of thermal activation. The thermal means of activation must activate at a temperature of not more than 250 °F (121 °C).