

7150.0330 METHODS OF RELEASE DETECTION FOR TANKS.

Subpart 1. **Applicability.** Each method of release detection for tanks used to meet the requirements of part 7150.0300, subpart 5, must be conducted according to this part.

Subp. 2. **Inventory control.** Product inventory control must be conducted monthly to detect a release of at least 1.0 percent flow-through plus 130 gallons on a monthly basis in the following manner:

A. inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day;

B. the equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

C. the regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;

D. deliveries are made through a drop tube that extends to within six inches of the tank bottom;

E. product dispensing is metered and recorded within the local standards for meter calibration incorporated by reference at part 7601.1000;

F. the measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month; and

G. practices described in American Petroleum Institute, Bulk Liquid Stock Control at Retail Outlets, API 1621 (1987), incorporated by reference under part 7150.0500, may be used, where applicable, as guidance in meeting the requirements of this subpart.

Subp. 3. **Manual tank gauging.** Manual tank gauging must be conducted in the following manner:

A. tank liquid level measurements are taken at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;

B. level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period; and

C. the equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch.

A leak is suspected and subject to the requirements of Minnesota Statutes, section 115.061, if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Tank Capacity	Weekly Standard (one-test)	Monthly Standard (four-test avg.)	Minimum Duration of Test
If manual tank gauging is the ONLY leak detection method used:			
up to 550 gallons	10 gallons	5 gallons	36 hours
551-1,000 gallons (when largest tank is 64" x 73")	9 gallons	4 gallons	44 hours
1,000 gallons (if tank is 48" x 128")	12 gallons	6 gallons	58 hours
If manual tank gauging is combined with Tank Tightness Testing:			
1,001-2,000 gallons	26 gallons	13 gallons	36 hours

Subp. 4. **Tank tightness testing.** Tank tightness testing must be capable of detecting a 0.1 gallon per hour leak rate from any part of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

Subp. 5. **Automatic tank gauging.** Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control must meet the following requirements:

- A. the automatic product level monitor test can detect a 0.2 gallon per hour leak rate from any part of the tank that routinely contains product; and
- B. inventory control is conducted according to the requirements of subpart 2.

Subp. 6. **Interstitial monitoring.**

- A. Interstitial monitoring of secondary containment tanks shall be conducted:
 - (1) continuously, by means of an automatic leak-sensing device that signals the operator of the presence of any liquid in the interstitial space; or
 - (2) monthly, by means of a procedure capable of detecting the presence of any liquid in the interstitial space.
- B. The interstitial space shall be maintained free of water, debris, or anything that could interfere with leak detection capabilities.
- C. On an annual basis, any automatic leak-sensing device shall be tested for proper function.

Subp. 7. **Other methods.** Any other type of release detection method, or combination of methods, can be used if:

A. the method can detect a 0.2 gallon per hour leak rate or a release of 150 gallons within a month with a probability of detection of 0.95 and a probability of false alarm of 0.05; and

B. the owner and operator can demonstrate to the commissioner that the method can detect a release as effectively as any of the methods allowed in this part and obtain the commissioner's prior written approval of the method. In comparing methods, the commissioner shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved by the commissioner, the owner and operator must comply with any conditions imposed by the commissioner on its use to ensure the protection of human health and the environment.

Statutory Authority: *MS s 116.49*

History: *16 SR 59; 32 SR 1751; 34 SR 1610*

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