

## Chapter 129 -- Standards for Sources

### SOURCES OF VOCs

#### **§129.56. Storage tanks greater than 40,000 gallons capacity containing VOCs.**

(a) No person may permit the placing, storing, or holding in a stationary tank, reservoir, or other container with a capacity greater than 40,000 gallons of any volatile organic compounds with a vapor pressure greater than 1.5 psia (10.5 kilopascals) under actual storage conditions unless such tank, reservoir or other container is a pressure tank capable of maintaining working pressures sufficient at all times to prevent vapor or gas loss to the atmosphere or is designed and equipped with one of the following vapor loss control devices:

(1) An external or an internal floating roof. This control equipment shall not be permitted if the volatile organic compounds have a vapor pressure of 11 psia (76 kilopascals) or greater under actual storage conditions.

(2) Vapor recovery system. A vapor recovery system consisting of a vapor gathering system capable of collecting the volatile organic compound vapors and gases discharged and a vapor disposal system capable of processing such volatile organic vapors and gases so as to prevent their emission to the atmosphere. Tank gauging and sampling devices shall be gas tight except when gauging or sampling is taking place. The vapor recovery system shall be maintained in good working order and recover at least 80% of the vapors emitted by such tank.

(b) An external floating roof must be fitted with a primary seal and a continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal). The external floating roof shall meet the following equipment requirements:

(1) Seal closure devices must meet the following requirements:

(i) There are no visible holes, tears, or other openings in the seals or seal fabric.

(ii) The seals are intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall.

(iii) For tanks with vapor-mounted primary seals, the accumulated area of gaps exceeding 1/8 inch in width between the secondary seal and the tank wall shall not exceed 1 square inch per foot of tank diameter. Compliance with this subsection shall be determined by physically measuring the length and width of all gaps around the entire circumference of the secondary seal in each place where a 1/8 inch uniform diameter probe passes freely (without forcing or binding against the seal) between the seal and tank wall and by summing the area of the individual gaps.

(2) Openings in the external floating roof, except for automatic bleeder vents, rim space

vents, and leg sleeves, are as follows:

(i) Equipped with covers, seals, or lids in the closed position except when the openings are in actual use.

(ii) Equipped with projections into the tank which remain below the liquid surface at all times.

(3) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports.

(4) Rim vents are set to open when the roof is being floated off the leg supports or at the recommended setting of the manufacturer.

(5) Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least 90% of the area of the opening.

(c) An internal floating roof must be fitted with a primary seal and must comply with the following equipment requirements:

(1) A closure seal, or seals, to close the space between the roof edge and tank wall is used.

(2) There are no holes, tears, or other openings in the seal or any seal fabric or materials.

(3) Openings except stub drains are equipped with covers, lids or seals such that:

(i) The cover, lid or seal is in the closed position at all times except when in actual use;

(ii) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports.

(iii) Rim vents, if provided are set to open when the roof is being floated off the roof leg supports or at the recommended setting of the manufacturer.

(d) This section shall not apply to petroleum liquid storage vessels which:

(1) Are used to store waxy, heavy pour crude oil.

(2) Have capacities less than 420,000 gallons and are used to store produced crude oil and condensate prior to lease custody transfer.

(e) For the purposes of this section, the petroleum liquid storage vessels listed below comply with the equipment requirements of this section. These tanks shall comply with the maintenance, inspection, and reporting requirements of this section. These petroleum liquid storage vessels are those:

(1) Which contain a petroleum liquid with a true vapor pressure less than 4 psia (27.6 kilopascals) and which are of welded construction and which presently possess a metallic-type shoe seal, a liquid-mounted foam seal, a liquid-mounted liquid filled type seal, or other closure device of demonstrated equivalence approved by the Department.

(2) Which are of welded construction, equipped with a metallic-type shoe primary seal and has a secondary seal from the top of the shoe seal to the tank wall (shoe-mounted secondary seal).

(f) The owner or operator of a petroleum liquid storage vessel with a floating roof subject to this regulation shall:

(1) Perform routine inspections annually in order to insure compliance with subsection (b) or subsection (c). The inspection shall include a visual inspection of the secondary seal gap when inspecting external floating roof tanks.

(2) For external floating roof tanks, measure the secondary seal gap annually in accordance with subsection (b)(1)(iii) when the floating roof is equipped with a vapor-mounted primary seal.

(3) Maintain records of the types of volatile petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of the inspections performed in subsections (f)(1) and (2). Copies of all such records shall be retained by the owner or operator for a period of 2 years after the date on which the record was made and shall be made available to the Department upon written or verbal request at any reasonable time.

(g) For volatile organic compounds whose storage temperature is governed by ambient weather conditions, the vapor pressure under actual storage conditions shall be determined using a temperature which is representative of the average storage temperature for the hottest month of the year in which such storage takes place.