

3745-21-21

Storage of volatile organic liquids in fixed roof tanks and external floating roof tanks.

[Comment: For dates and availability of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see paragraph (JJ) of rule 3745-21-01 of the Administrative Code titled "~~Reference to~~referenced materials."]

(A) Applicability.

~~The requirements of this~~ This rule shall apply to any storage tank that meets all of the following criteria:

- (1) Tanks that store volatile organic liquids;~~;~~
- (2) The tank is located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county;~~and.~~
- (3) The facility has a combined total potential to emit for VOC emissions equal to or greater than one hundred tons of VOCs per calendar year on or after May 27, 2005, from all of the following:
 - (a) All volatile organic liquid storage tanks;~~;~~
 - (b) All non-CTG sources;~~and.~~
 - (c) Unregulated emissions from CTG sources.

(B) The definitions applicable to this rule are contained in paragraphs (B) and (E) of rule 3745-21-01 of the Administrative Code.

(C) Storage of volatile organic liquids in fixed roof tanks.

- (1) Except where exempted under paragraph (C)(5) of this rule, no owner or operator of a fixed roof tank shall place, store, or hold any volatile organic liquid with a maximum true vapor pressure which is greater than 0.75 pounds per square inch absolute, but less than 11.1 pounds per square inch absolute, in any such tank, after the date specified in paragraph (G) of this rule, unless such tank is designed or equipped with one of the following vapor control systems:
 - (a) An internal floating roof ~~meeting the requirements of~~ that meets paragraph (C)(3) of this rule;~~or.~~

- (b) A closed vent system and control device ~~meeting the requirements of that~~ meets paragraph (C)(4) of this rule.
- (2) Except where exempted under paragraph (C)(5) of this rule, no owner or operator of a fixed roof tank shall place, store, or hold any volatile organic liquid with a maximum true vapor pressure which is equal to or greater than 11.1 pounds per square inch absolute, in any such tank, after the date specified in paragraph (G) of this rule, unless such tank is designed or equipped with a closed vent system and control device ~~meeting the requirements of that~~ meets paragraph (C)(4) of this rule.
- (3) If the fixed roof tank is equipped with an internal floating roof, the following ~~requirements and specifications~~ shall be met:
- (a) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall float on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
- (b) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:
- (i) A foam or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam or liquid-filled seal mounted in contact with the liquid, between the wall of the storage vessel and the floating roof, and extending continuously around the circumference of the tank.
- (ii) Two seals mounted one above the other, so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both ~~must~~ shall be continuous.
- (iii) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A

flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

- (c) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
- (d) Each opening in a non-contact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and the rim space vents, shall provide a projection below the liquid surface.
- (e) Each opening in the internal floating roof, except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains, shall be equipped with a cover or lid which shall be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
- (f) The sample well, which penetrates the internal floating roof for the purpose of sampling, shall have a slit fabric cover that covers at least ninety per cent of the opening.
- (g) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.
- (h) Inspection ~~requirements~~.

The owner or operator of each storage vessel equipped with an internal floating roof, shall comply with the following ~~inspection requirements~~:

- (i) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with a volatile organic liquid. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric, or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
- (ii) For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the

primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every twelve months after initial fill. If the internal floating roof is not resting on the surface of the volatile organic liquid inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within forty-five days. If a failure that is detected during inspections required in this paragraph cannot be repaired within forty-five days and if the vessel cannot be emptied within forty-five days, a thirty-day extension may be requested from the director in the inspection report required in paragraph (C)(3)(j)(iii) of this rule. Such a request for an extension ~~must~~shall document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will ensure that the control equipment will be repaired or the vessel will be emptied within thirty days.

- (iii) For vessels equipped with both primary and secondary seals, visually inspect the vessel as follows:
 - (a) ~~Visually inspect the vessel as~~As specified in paragraph (C)(3)(h)(iv) of this rule at least every five years; ~~or,~~
 - (b) ~~Visually inspect the vessel at~~At least once every twelve months as specified in paragraph (C)(3)(h)(ii) of this rule.
- (iv) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than ten per cent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with a volatile organic liquid. In no event shall inspections conducted in accordance with this provision occur at intervals greater than ten years in the case of vessels conducting the annual visual inspection as specified in paragraphs (C)(3)(h)(ii) and (C)(3)(h)(iii)(b) of this rule and at intervals no greater than five years in the case of vessels specified in paragraph (C)(3)(h)(iii)(a)

of this rule.

- (i) Notify the director in writing at least thirty days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (C)(3)(h)(i) and (C)(3)(h)(iv) of this rule to afford the director or the director's authorized designee the opportunity to have an observer present. If the inspection required by paragraph (C)(3)(h)(iv) of this rule is not planned and the owner or operator could not have known about the inspection thirty days in advance of refilling the tank, the owner or operator shall notify the director at least seven days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the director at least seven days prior to the refilling.

(j) ~~Record keeping~~ Recordkeeping and reporting requirements.

The owner or operator of each storage vessel equipped with an internal floating roof shall keep records and furnish reports in accordance with the following:

- (i) Furnish the director with a report that describes the control equipment and certifies that the control equipment meets the specifications of paragraph (C) of this rule. This report shall be submitted in accordance with the requirements specified in paragraph (H) of this rule.
- (ii) Keep a record of each inspection performed as required by paragraphs (C)(3)(h)(i) to (C)(3)(h)(iv) of this rule. Each record shall identify the storage vessel for which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
- (iii) If any of the conditions described in paragraph (C)(3)(h)(ii) of this rule are detected during the annual visual inspection required by paragraph (C)(3)(h)(ii) of this rule, a report shall be furnished to the director within thirty days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

- (k) After each inspection required by paragraph (C)(3)(h)(iii) of this rule that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in paragraph (C)(3)(h)(ii) or (C)(3)(h)(iv) of this rule, a report shall be furnished to the director within thirty days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of paragraph (C)(3) of this rule and list each repair made.
 - (l) The owner or operator shall keep copies of all reports and records required by paragraph (C)(3)(j) of this rule for at least five years.
- (4) If the fixed roof tank is equipped with a closed vent system and control device, as required by paragraph (C)(1)(b) or (C)(2) of this rule, the following specifications shall be met:
- (a) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background and visual inspections, as determined by the methods specified in 40 CFR 60.485(c).
 - (b) If a control device other than a flare is employed, the control device shall be designed and operated to reduce inlet VOC emissions by ninety five per cent or greater. The control efficiency shall be determined in accordance with paragraph (C) of rule 3745-21-10 of the Administrative Code.
 - (c) If a flare is used as the control device, it shall meet the specifications described in the general control device requirements specified in 40 CFR 60.18.
 - (d) The owner or operator of each tank that is equipped with a closed vent system and control device other than a flare, to meet the control requirements as required in paragraph (C)(4) of this rule, shall meet the specifications identified in paragraphs (C)(4)(a) and (C)(4)(b) of this rule and shall submit, for approval by the director, an operating plan containing the following information ~~listed below~~:
 - (i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and

VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this rule, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of eight hundred sixteen degrees centigrade is used to meet the ninety-five per cent control requirement, documentation that those conditions will exist during all loading conditions is sufficient to meet the requirements of this paragraph.

- (ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).
- (e) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the director in accordance with paragraph (C)(4)(d) of this rule, unless the plan was modified by the director during the review process, in which case, the modified plan applies. The operating plan required by paragraph (C)(4)(d) of this rule shall be maintained by the owner or operator for the life of the control equipment and shall be made available to the director upon request.
 - (f) Any approval granted by the director in accordance with paragraph (C)(4)(d) of this rule ~~must~~ shall be approved by the USEPA as a revision of the Ohio state implementation plan.
 - (g) The owner or operator of each source that is equipped with a closed vent system and a flare, to meet the control requirements in paragraphs (C)(4)(a) and (C)(4)(c) of this rule, shall meet the requirements as specified in the general control device requirements of 40 CFR 60.18(e) and (f).
 - (h) Monitoring, ~~record keeping~~ recordkeeping and reporting requirements.
 - (i) After installing control equipment in accordance with paragraph (C)(1)(b) or (C)(2) of this rule (closed vent system and control device other than a flare), the owner or operator shall keep the

following records:

- (a) A copy of the operating plan; ~~and~~.
 - (b) A record of the measured values of the parameters monitored in accordance with paragraph (C)(4)(e) of this rule.
- (ii) After installing a closed vent system and flare to comply with the control requirements of paragraph (C)(1)(b) or (C)(2) of this rule, the owner or operator shall meet the following ~~requirements~~:
- (a) A report containing the measurements required by 40 CFR 60.18(f)(1) to (f)(6), shall be furnished to the director as required by 40 CFR 60.8. This report shall be submitted within six months of the initial start-up date of the flare.
 - (b) Records shall be kept of all periods of operation during which the flare pilot flame is absent.
 - (c) Semiannual reports of all periods of time recorded under paragraph (C)(4)(h)(ii)(b) of this rule during which the pilot flame was absent shall be furnished to the director. These reports shall be submitted to the appropriate Ohio ~~environmental protection agency~~ EPA district office or local air agency by July fifteenth and January fifteenth of each calendar year and shall cover the previous six-month period.
- (i) The owner or operator shall keep copies of all reports and records required by paragraph (C)(4)(h) of this rule for at least five years.
- (5) A fixed roof tank with a capacity less than forty thousand gallons is exempt from ~~the requirements of~~ paragraphs (C)(1) and (C)(2) of this rule.
- (D) Storage of volatile organic liquids in external floating roof tanks.
- (1) Except where exempted under paragraph (D)(2) of this rule, no owner or operator of an external floating roof tank shall place, store, or hold any volatile organic liquid in any such tank, after the date specified in paragraph (F) of this rule, unless the following is met:
- (a) Each external floating roof is equipped with a closure device between the

wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

- (i) Except as provided in paragraph (D)(3)(c) of this rule, the primary seal shall completely cover the annular space between the edge of the floating roof and tank wall and shall be either a liquid mounted seal or a shoe seal.
 - (ii) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion, except as allowed in paragraph (D)(3)(c) of this rule.
 - (iii) The tank shall be equipped with the closure device that meets the requirements of this rule after the next scheduled tank cleaning, but no later than the date specified in paragraph (G) of this rule.
- (b) Except for automatic bleeder vents and rim space vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least ninety percent of the area of the opening.
- (c) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.
- (2) The following external floating roof tanks shall be exempted from ~~the requirements of~~ paragraph (D)(1) of this rule:

- (a) Any tank that has a capacity of less than forty thousand gallons; ~~or,~~
- (b) Any tank that contains a volatile organic liquid which, as stored, has a maximum true vapor pressure less than 0.75 pounds per square inch absolute.

(3) Inspection and measurement ~~requirements~~.

The owner or operator of an external floating roof tank shall do the following:

- (a) Determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel and between the second seal and the wall of the storage vessel according to the following frequency:
 - (i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within sixty days of the initial fill with a volatile organic liquid and at least every five years thereafter; ~~and,~~
 - (ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within sixty days of the initial fill with a volatile organic liquid and at least once per year thereafter; ~~and,~~
 - (iii) If any source ceases to store a volatile organic liquid for a period of one year or more, subsequent introduction of a volatile organic liquid into the vessel shall be considered an initial fill for the purposes of paragraphs (D)(3)(a)(i) and (D)(3)(a)(ii) of this rule.
- (b) Determine gap widths and areas in the primary and secondary seals individually according to the following procedures:
 - (i) Measure the seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.
 - (ii) Measure the seal gaps around the entire circumference of the tank, in each place where a one-eighth inch diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the storage vessel, and measure the circumferential distance of each such location.
 - (iii) The total surface area of each gap described in paragraph (D)(b)(ii)

of this rule shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and then multiplying each such width by its respective circumferential distance.

- (iv) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (D)(3)(c)(i) or (D)(3)(c)(ii) of this rule.
- (c) Make necessary repairs or empty the storage vessel within forty-five days of identification in any inspection for seals not meeting the following requirements:
- (i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 10.0 square inches per foot of tank diameter, and the width of any portion of any gap shall not exceed 1.5 inches. There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
 - (ii) The secondary seal is to meet the following requirements:
 - (a) The secondary seal is to be installed above the primary seal so that ~~it~~the seal completely covers the space between the roof edge and the tank wall except as provided in paragraph (D)(3)(c)(ii)(b) of this rule.
 - (b) The accumulated area of gaps between the tank wall and the secondary seal used in combination with a metallic shoe or liquid-mounted primary seal shall not exceed 1.0 square inches per foot of tank diameter, and the width of any portion of any gap shall not exceed 0.5 inches. There shall be no gaps between the tank wall and the secondary seal when used in combination with a vapor mounted primary seal.
 - (c) There are to be no holes, tears, or other openings in the seal or seal fabric.

If a failure that is detected during inspections required in paragraph (D)(3)(a) of this rule cannot be repaired within forty-five days and if the

vessel cannot be emptied within forty-five days, a thirty-day extension may be requested from the director in the inspection report required in paragraph (D)(4)(d) of this rule. Such extension request ~~must~~shall include a demonstration of unavailability of alternative storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

- (d) Notify the director thirty days in advance of any gap measurements required by paragraph (D)(3)(a) of this rule to afford the director the opportunity to have an observer present.
- (e) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.
 - (i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with a volatile organic liquid.
 - (ii) For all the inspections required by paragraph (D)(3)(e) of this rule, the owner or operator shall notify the director in writing at least thirty days prior to the filling or refilling of each storage vessel to afford the director or the director's authorized designee the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (D)(3)(e) of this rule is not planned and the owner or operator could not have known about the inspection thirty days in advance of refilling the tank, the owner or operator shall notify the director at least seven days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the director at least seven days prior to the refilling.

(4) ~~Record keeping~~Recordkeeping and reporting requirements.

The owner or operator of an external floating roof tank shall meet the

following ~~record keeping and reporting requirements~~:

- (a) Furnish the director with a report that describes the control equipment and certifies that the control equipment meets ~~the specifications of~~ paragraphs (D)(1) and (D)(3) of this rule. This report shall be submitted in accordance with ~~the requirements specified in~~ paragraph (H) of this rule.
- (b) Keep a record of each gap measurement performed as required by paragraphs (D)(3)(a) and (D)(3)(b) of this rule. Each record shall identify the storage vessel in which the measurement was performed and shall contain the following:
 - (i) The date of measurement; ~~and~~
 - (ii) The raw data obtained in the measurement; ~~and~~
 - (iii) The calculations described in paragraph (D)(3)(b) of this rule.
- (c) Within sixty days of performing the seal gap measurements required by paragraph (D)(3)(a) of this rule, furnish the director with a report that contains the following:
 - (i) The date of measurement; ~~and~~
 - (ii) The raw data obtained in the measurement; ~~and~~
 - (iii) The calculations described in paragraph (D)(3)(b) of this rule.
- (d) After each seal gap measurement that detects gaps exceeding the limitations specified by paragraph (D)(3)(c) of this rule, submit a report to the director within thirty days of the inspection. The report shall identify the vessel and contain the information specified in paragraph (D)(4)(c) of this rule, the date the vessel was emptied or the repairs made, and the ~~date(s)~~ date of the repairs.

(E) ~~Record keeping requirements~~ Recordkeeping for fixed roof tanks and external floating roof tanks storing volatile organic liquids.

- (1) Any owner or operator of a fixed roof or an external floating roof tank that is not exempted pursuant to paragraph (C)(5) or (D)(2) of this rule shall

maintain records of the following information in a readily accessible location for at least five years and shall make copies of the records available to the director upon verbal or written request:

- (a) The types of volatile organic liquids stored in the tank;
 - (b) The maximum true vapor pressure (pounds per square inch absolute), as stored, of each liquid that has a maximum true vapor pressure greater than 0.5 pounds per square inch absolute; ~~and~~
 - (c) The dimension and volume of each tank.
- (2) The owner or operator of each storage vessel that is exempt pursuant to paragraph (C)(5) or (D)(2) of this rule shall maintain records of the following information in a readily accessible location for at least five years and shall make copies of the records available to the director upon verbal or written request:

- (a) The dimension of the storage vessel; ~~and~~
- (b) An analysis of the capacity of the storage vessel.

Each storage vessel with a design capacity less than forty thousand gallons is not subject to ~~no~~any provisions of this rule other than those required by maintaining readily accessible records of the dimensions of the storage vessel and analysis of the capacity of the storage vessel.

- (3) If an owner or operator places, stores, or holds in a fixed roof tank or an external floating roof tank, that is not exempted pursuant to paragraph (C)(5) or (D)(2) of this rule, any volatile organic liquid with a true vapor pressure which is greater than 0.75 pounds per square inch absolute and such tank does not comply with ~~the requirements of~~ paragraph (C)(1), (C)(2), or (D)(1) of this rule, the owner or operator shall so notify the director within thirty days of becoming aware of the occurrence.
- (4) The owner or operator shall keep copies of all reports and records required by paragraphs (C)(3)(j), (C)(4)(h), (D)(4), and (I) of this rule for at least five years.

(F) Monitoring ~~requirements for~~of volatile organic liquid operations.

- (1) Except as provided in paragraph (F)(4) of this rule, the owner or operator of

each storage vessel with a design capacity greater than or equal to forty thousand gallons storing a liquid with a maximum true vapor pressure that is normally less than 0.75 pounds per square inch absolute shall notify the director within thirty days when the maximum true vapor pressure of the liquid exceeds 0.75 pounds per square inch absolute.

- (2) Available data on the storage temperature may be used to determine the maximum true vapor pressure.
 - (a) For liquids in vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the national weather service.
 - (b) For other liquids, the vapor pressure shall be determined using one of the following:
 - (i) ~~Determined by~~ ASTM method ~~D2879-97(2007)~~D2879-10.;
 - (ii) ~~Measured~~As measured by an appropriate method approved by the director and USEPA; ~~or,~~
 - (iii) ~~Calculated~~As calculated by an appropriate method approved by the director and USEPA.
- (3) The owner or operator of each vessel storing a mixture of indeterminate or variable composition shall be subject to the following:
 - (a) Prior to the initial filling of the vessel, the maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (F)(2) of this rule.
 - (b) For vessels in which the vapor pressure of the anticipated liquid composition is 0.5 pounds per square inch absolute or greater but less than 0.75 pounds per square inch absolute, an initial physical test of the vapor pressure is required; a physical test at least once every six months thereafter is required as determined by the following methods:
 - (i) ASTM method ~~D2879-97(2007)~~D2879-10.;

(ii) ASTM method D323-08; ~~or,~~

(iii) As measured by an appropriate method approved by the director.

- (4) The owner or operator of each vessel equipped with a closed vent system and control device ~~meeting the specifications of~~that meets paragraph (C)(4) of this rule is exempt from ~~the requirements of~~ paragraphs (F)(1) and (F)(2) of this rule.

(G) Compliance dates.

The owner or operator of a facility that is subject to this rule shall comply with ~~the requirements of~~ this rule no later than the following dates:

- (1) For any storage of a volatile organic liquid which commenced operation after ~~the effective date of this rule~~August 25, 2008, the compliance date for the operation is the initial startup date of the operation or August 25, 2009, whichever is later.
- (2) For any storage of a volatile organic liquid which commenced operation before ~~the effective date of this rule~~August 25, 2008, the compliance date for the operation is August 25, 2009.

(H) Compliance certification.

- (1) The owner or operator of a facility that is subject to this rule shall notify the appropriate Ohio ~~environmental protection agency~~EPA district office or local air agency in writing within thirty days following the completion of any of the following requirements. For a volatile organic liquid storage operation subject to the volatile organic emission control requirements in paragraph (C)(1), (C)(2) or (D)(1) of this rule:
- (a) The completion of installation and initial use of vapor control equipment employed for all tanks that store a volatile organic liquid; ~~or,~~
- (b) The completion of any inspection ~~and/or~~ measurement requirements specified under paragraphs (C)(3)(h) and (D)(3) of this rule for all tanks that store a volatile organic liquid.
- (2) The compliance certification under paragraph (H)(1) of this rule shall provide the following, where applicable:

- (a) A description of the requirements.
- (b) A description of the vapor control equipment employed.
- (c) A description of the monitoring devices.
- (d) A description of the records that document continuing compliance.
- (e) The results of any compliance tests, including documentation of test data.
- (f) The results of any records that document continuing compliance, including calculations.
- (g) A statement by the owner or operator of the affected facility as to whether the volatile organic liquid storage operation has complied with the ~~requirement(s)~~requirements.

(I) ~~Requirements on applicability~~Applicability notification, compliance certification, and permit application.

- (1) The owner or operator of a facility that is subject to this rule and that operates a storage tank for volatile organic liquids with an initial startup date before ~~the effective date of this rule~~August 25, 2008 shall notify the appropriate Ohio ~~environmental protection agency~~EPA district office or local air agency in writing that the volatile organic liquid storage tank is subject to this rule. The notification, which shall be submitted not later than ~~sixty days after the effective date of this rule~~October 24, 2008 (or within sixty days after the volatile organic liquid storage tank becomes subject to this rule), shall provide the following information:
 - (a) Name and address of the owner or operator.
 - (b) Address (i.e., physical location) of the affected facility.
 - (c) Description of the volatile organic liquid storage tank and Ohio ~~environmental protection agency~~EPA emissions unit number (if assigned).
 - (d) Identification of the VOC emission requirement, the means of compliance, and the compliance date for the volatile organic liquid

storage tank.

- (e) ~~Regarding an air pollution permit for the volatile organic liquid storage tank, whichever of the following is applicable~~An application for an operating permit or an application for a modification to an operating permit in accordance with Chapter 3745-77 of the Administrative Code (for sources subject to the Title V permit program) or an application for a permit-to-install and operate or an application for a modification to a permit-to-install and operate in accordance with Chapter 3745-31 of the Administrative Code (for sources not subject to the Title V permit program) for each subject process that meets one of the following:

- (i) ~~Submission of an application for an operating permit, a modification, or a permit to operate renewal in accordance with rule 3745-31-02 of the Administrative Code; or~~The process does not possess an effective operating permit or permit-to-install and operate.

~~[Comment: Applications requiring submittal prior to June 30, 2008, were submitted in accordance with Chapter 3745-35 of the Administrative Code.]~~

- (ii) ~~Submission of a statement of intent to submit an application for a Title V permit or revision of a Title V permit in accordance with paragraph (B) of rule 3745-77-02 or rule 3745-77-06 of Administrative Code, respectively~~The process possesses an effective operating permit or permit-to-install and operate and the owner or operator cannot certify in writing to the director that such subject process is in compliance with this rule. An application for an operating permit or permit-to-install and operate is not required provided the subject process is operating under an effective permit and certifies compliance. Such certification shall include all compliance certification requirements under paragraph (H) of this rule.

~~[Comment: Applications for sources not subject to Chapter 3745-77, requiring submittal prior to June 30, 2008, were submitted in accordance with Chapter 3745-35 of the Administrative Code.]~~

- (2) The owner or operator of a facility that is subject to this rule and that has a volatile organic liquid storage tank with an initial start-up date on or after ~~the effective date of this rule~~August 25, 2008 shall notify the appropriate Ohio ~~environmental protection agency~~EPA district office or local air agency in writing that the volatile organic liquid storage tank is subject to this rule. The

notification, which shall be submitted not later than either the date of initial startup of the volatile organic liquid storage tank or ~~sixty days after the effective date of this rule~~October 24, 2008 (whichever is later), shall provide the information listed under paragraph (I)(1) of this rule. The application for an installation permit under rule 3745-31-02 of the Administrative Code may be used to fulfill the notification requirements of this paragraph.

Effective:

Five Year Review (FYR) Dates: 07/13/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3704.03(E)
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