

Sec 1. Subsection (a) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

Sec. 22a-174-20. Control of organic compound emissions

(a) Storage of [“]volatile organic compounds[”] and restrictions for the Reid Vapor Pressure of gasoline.

[(a)](1) Definitions. For the purpose of this section:

~~["Approved control system" means, a vapor balance system or a vapor recovery system.~~

~~“Delivery vehicle” means a tank truck, tank equipped trailer, railroad tank car, or other “mobile source” equipped with a storage “tank” used for the transportation of gasoline from “sources” of supply to any stationary storage “tank.”]~~

- (A) “Aboveground” means located on or above the surface of the ground, partially buried, bunkered or located in a subterranean vault.
- (B) “Degassing” means the process of removing organic vapors from a storage tank in preparation for human entry.
- (C) “Dispensing facility” means any site where gasoline is delivered to motor vehicles other than agricultural vehicles from any stationary storage [“]tank[”] with a capacity of 250 gallons or more.
- (D) “Floating roof” means a movable roof in a storage vessel consisting of a floating deck resting on the surface of the liquid contents, a continuous seal supported against the inner surface of the tank shell, and an envelope closing the gap between the floating deck and the seal. The entire deck-seal-envelope combination is free to rise and fall with the surface of the liquid during filling and emptying of the storage vessel.
- (E) “Gasoline” means any petroleum distillate or petroleum distillate/alcohol blend having a reid vapor pressure of [four pounds] 27.6 kilopascals or greater and used as a [motor vehicle] internal combustion engine fuel.
- (F) “Gasoline storage tank farm” means a [“premise”] premises with any individual [“]gasoline[”] storage [“]tank[”] with a capacity equal to or greater than forty thousand (40,000) gallons.
- (G) “Leak-free” means a condition that exists when the reading on a portable hydrocarbon analyzer is less than 500 ppm, expressed as methane, above background, measured using EPA Method 21, as identified in 40 CFR Part 60, Appendix A, Determination of Volatile Organic Compounds Leaks.
- (H) “Reid Vapor Pressure” or “RVP” means the vapor pressure of a liquid in pounds per square inch absolute at one hundred (100) degrees fahrenheit as determined by American Society for Testing and Materials method D323-82 “Standard Method for Vapor Pressure of Petroleum Products (Reid Method).”

- (I) “Roof landing” means an event where the liquid level in a floating roof tank is lowered to the point where the floating roof is resting on its legs or is supported from above by cables or hangers, and is no longer floating on the surface of the stored liquid.
- (J) “Storage tank” means any tank, reservoir or vessel that is a container for liquids or gases, wherein:
- (i) No manufacturing process, or part thereof, other than filling or emptying takes place, and
 - (ii) The only treatment carried out is treatment necessary to prevent change from occurring in the physical condition or chemical properties of the liquids or gases deposited into the container. Such treatment may include recirculating, agitating, maintaining the temperature of the stored liquids or gases, or replacing air in the vapor space above the stored liquids or gases with an inert gas in order to inhibit the occurrence of chemical reaction;
- (K) “Throughput” means the number of gallons delivered through all equipment at a dispensing facility or a loading facility over a specified time interval.
- (L) “Underground” means situated below the grade of the land and completely covered with soil.

~~[“Vapor balance system” means a combination of pipes or hoses which create a closed connection between the vapor spaces of an unloading “tank” and receiving “tank” such that vapors displaced from the receiving “tank” are transferred to the “tank” being unloaded and for which the vapor space connections on the unloading tank, the receiving tank and the pipes or hoses used are equipped with fittings which are vapor tight and which will automatically and immediately close upon disconnection so as to prevent the release of vapors. The complete system as a whole and not just the individual components shall have been tested and approved by a nationally recognized testing laboratory.]~~

- (M) “Vapor recovery system” means a device or system of devices with attendant valves, fittings, piping, and other appurtenances incorporating a means for the incineration of vapors or the liquefaction of vapors by absorption, adsorption, condensation or other means. The complete system as a whole and not just the individual components shall have been tested and approved by a nationally recognized testing laboratory.

~~[(a)(2) No “person” shall place, store or hold in any stationary “tank” reservoir or other container of more than 40,000 gallons capacity any “volatile organic compound” with a vapor pressure of 1.5 pounds per square inch absolute or greater under actual storage conditions unless the “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 vapor loss control devices listed in subparagraphs (A) through (D) below. If the control devices specified in subparagraphs 22a-174-20(a)(2)(A) or (a)(2)(D) are used to comply~~

~~with the requirements of this subdivision, then the requirements of subdivision 22a-174-20(a)(8) must also be met.]~~

(2) No owner or operator shall place, store or hold in any aboveground storage tank of 40,000 gallons (150,000 liters) capacity or greater any VOC with a vapor pressure of 0.75 pounds per square inch or greater under standard conditions unless the tank is designed and equipped with a vapor loss control device identified in either subparagraph (A), (B), (C) or (D) of this subdivision.

(A) The tank is a pressure tank capable of maintaining working pressures sufficient at all times to prevent vapor or gas loss to the atmosphere;

~~[(A)](B) [A] The tank is equipped with a fixed roof and a floating roof, consisting of a pontoon type, double deck type roof or internal floating cover, which will rest on the surface of the liquid contents and be equipped with a closure seal or seals to close the space between the roof edge and [“]tank[”] wall. This control equipment is not permitted if the [“volatile organic compound”] VOC has a vapor pressure of 11.0 pounds per square inch absolute (568 mm. Hg)[,] or greater under [actual storage] standard conditions. [All “tank” gauging or sampling devices must be gas-tight except when “tank” gauging or sampling is taking place.] An owner or operator limiting vapor loss according to this subparagraph shall ensure that:~~

- (i) There are no visible holes, tears or other openings in the seal or any seal fabric or materials.
- (ii) All 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 in actual use.
 - (II) Automatic bleeder vents are closed at all times except when the roof is being floated off or being 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 manufacturer's recommended setting, and
 - (IV) All tank gauging and sampling devices shall be leak-free except when tank gauging or sampling is taking place.
- (iii) Routine inspections are conducted through roof hatches once per month.
- (iv) The concentration of organic vapor in the vapor space above the internal floating roof shall not exceed 30 percent of its lower explosive limit, and
- (v) A complete inspection of cover, deck fittings and rim seal system is conducted whenever the tank is emptied and degassed, but not less than once every 10 years;

~~[(B)](C) [A] The tank is equipped with a fixed roof and a [“]vapor recovery system[”] which] that collects all volatile organic compound vapors and gases discharged from the tank and a vapor return or disposal system [which] that is designed to process such~~

vapors so as to reduce their emission to the atmosphere by at least 95 percent by weight. An owner or operator limiting vapor loss according to this subparagraph shall perform the following actions, by (ten years after the effective date of these amendments) if the tank was in existence on (the day before the effective date of these amendments) or by the initial fill date if a tank is constructed on or after (the effective date of these amendments):

- (i) Equip any gauging or sampling device on the tank with a leak-free cover that shall be closed at all times, with no visible gaps, except during gauging or sampling,
- (ii) Maintain the fixed roof in a leak-free condition with no holes, tears or uncovered openings, and
- (iii) Install and maintain each roof opening in a leak-free condition at all times except when the cover must be open for access or when a vent is required to be open to relieve excess pressure or vacuum in accordance with the manufacturer's design; or

~~[(C)]~~(D) ~~[Other]~~ The tank is equipped with other equipment or means of air pollution control with an efficiency equal to or greater than that required under subparagraph [22a-174-20(a)(2)(B)] (B) of this subdivision [for purposes of "air pollution" control as may be] that is approved by the ["Commissioner"] by permit or order.

~~[(D) On or after June 1, 1985 a floating roof, consisting of a pontoon type, double deck type roof or external floating cover, which will rest on the surface of the liquid contents and be equipped with primary and secondary closure seals to close the space between the roof edge and the tank wall. This control equipment is not permitted if the volatile organic compound has a vapor pressure of 11.0 pounds per square inch absolute (568 mm. Hg), or greater under actual storage conditions. All tank gauging or sampling devices must be gas tight except when tank gauging or sampling is taking place. The owner or operator of any tank subject to this provision shall ensure that:~~

- ~~(i) Any seal is intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall;~~
- ~~(ii) The total area of gaps, determined in accordance with the requirements of subdivision 22a-174-20(a)(9), exceeding 0.125 inches in width between the secondary closure seal and the tank wall does not exceed 1.0 square inch per foot of tank diameter;~~
- ~~(iii) A secondary closure seal gap measurement as specified in (ii) above is made annually;~~
- ~~(iv) A visual inspection of the secondary closure seal is conducted semi-annually;~~
- ~~(v) Any emergency roof drain is provided with a slotted fabric cover which covers at least ninety percent (90%) of the area opening.]~~

~~[(a)]~~(3) No ~~["person"]~~ shall place, store, or hold in any stationary storage vessel of more than 250-gallon (950 liter) capacity any ~~["volatile organic compound"]~~ VOC with a vapor pressure of ~~[1.5]~~ 0.75 pounds per square inch or greater under ~~[actual storage]~~ standard conditions unless such vessel is equipped with a permanent ~~["submerged fill pipe"]~~ [with a

discharge point eighteen (18) inches or less from the bottom of the storage vessel] or is a pressure [“]tank[”] as described in subdivision [22a-174-20(a)(2)] (2) of this subsection. Submerged fill pipes installed on or before (the effective date of these amendments) shall have a discharge point no more than 18 inches from the bottom of the storage tank or be compliant with the requirements of 40 CFR Part 63 Subpart CCCCCC. Submerged fill pipes installed after (the effective date of these amendments) shall have a discharge point no more than 6 inches from the bottom of the storage tank.

[(a)](4) The provisions of subdivision [22a-174-20(a)(3)] (3) of this subsection shall not apply to the loading of [“]volatile organic compounds[”] VOC into any storage vessel having a capacity of less than one-thousand (1,000) gallons which was installed prior to June 1, 1972, nor to any underground storage vessel installed prior to June 1, 1972, where the fill pipe between the fill connection and the storage vessel is an [“]offset fill pipe.[”]

(5) The owner or operator shall not cause, allow or permit any evidence of leakage from any piece of equipment in VOC service, including but not limited to tanks, pumps, valves, compressors and safety/relief valves. The owner or operator of any emission source that appears to be leaking on the basis of sight, smell or sound shall repair such leak within fifteen (15) days after detection. A request to delay a repair of a fugitive emission may be made to the Commissioner if the repair is infeasible for technical or safety reasons.

(6) The external surfaces of any storage tank containing VOC with a vapor pressure of 0.75 pounds per square inch or greater under standard conditions that has a maximum capacity of 2,000 gallons (7,570 liters) or greater and is exposed to the rays of the sun shall be either mill-finished aluminum or painted and maintained white upon the next painting of the tank, or upon being returned to service after being out of service for the first time after (the effective date of these amendments), whichever is sooner, and no less than 10 years after (the effective date of these amendments), except that this provision shall not apply to words and logograms applied to the external surface of the storage tank for purposes of identification provided such symbols do not cover more than 20 percent of the external surface area of the tank's sides and top or more than 200 square feet (18.6 square meters), whichever is less.

(7) When performing a roof landing of a floating roof tank, the owner or operator of any tank shall:

(A) When the roof is resting on its leg supports or suspended by cables or hangers, the process of filling, emptying or refilling shall be continuous and shall be accomplished as rapidly as possible; and

(B) After the tank is refilled after being degassed for the first time after (the effective date of these amendments), any in-service roof landing shall be with the landed height of the floating roof at its minimum setting.

(8) On and after (one year after effective date of this amendment), the owner or operator of any aboveground storage tank subject to subdivision (2) of this subsection shall not perform degassing and cleaning during the period May 1 through September 30 of any year unless:

- (A) For a tank storing a VOC with a vapor pressure of 0.5 pounds per square inch or greater at standard conditions, the owner or operator may degas the tank during May 1 through September 30 if the owner or operator:
- (i) Empties the tank of the VOC liquid,
 - (ii) Minimizes VOC vapors in the tank vapor space by one of the following methods:
 - (I) Exhausts VOCs contained in the tank vapor space to a vapor control system rated at a minimum 95 percent efficiency until the organic vapor concentration is 5,000 parts per million by volume (ppmv) or less as methane, or is 10 percent or less of the lower explosive limit, whichever is less,
 - (II) Displaces VOCs contained in the tank vapor space to a vapor control system rated at a minimum 95 percent efficiency by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a vapor pressure of less than 0.5 pounds per square inch, water, clean produced water, or produced water derived from crude oil having a vapor pressure less than 0.5 pounds per square inch,
 - (III) If the tank is a free-water knockout tank, degases the tank vapor space by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced, or
 - (IV) Uses other measures approved by the Commissioner as being equally or more effective in preventing VOC emissions to the outdoor atmosphere, and
 - (iii) As appropriate, temporarily removes a suitable tank fitting, such as a manway, to facilitate connection to an external vapor control system for no longer than one hour;
- (B) The owner or operator may clean a tank storing a VOC with vapor pressure of 0.5 pounds per square inch or greater at standard conditions during May 1 through September 30 if:
- (i) At least one of the following cleaning agents is used:
 - (I) Diesel fuel,
 - (II) A solvent with an initial boiling point of greater than 302 degrees Fahrenheit,
 - (III) A solvent with a vapor pressure less than 0.5 pounds per square inch,

- (vi) Documentation of any leak detected, including, but not limited to, date the leak was detected, location of the leak, type of repair made and date of repair and explanation of reason for delaying repair, if applicable.
- (vii) For each floating roof landing event, tank contents before landing and after refilling, landed height of the floating roof, height of any liquid remaining in the bottom of the tank after landing, duration of landing, landing emissions calculated using AP-42 Chapter 7 methodology, and emissions control method, if applicable.
- (viii) Records of all tank degassing, cleaning and sludge removal activities performed pursuant subdivision (8) of this subsection, and
- (ix) An approval by the commissioner issued pursuant to subdivision (2)(D) or (8)(A)(ii) of this subsection.

[(a)(5)](10) Between May 1 and September 15 the owner or [“]operator[”] of any [“]gasoline storage tank farm[”] shall not offer for sale, sell or deliver to any [“]dispensing facility[”] in Connecticut [“]gasoline[”] with a [“]Reid Vapor Pressure[”] in excess of 9.0 pounds per square inch.

[(a)(6)](11) In addition to the requirements of section 22a-174-4, the [“]Commissioner[”] may by permit or order require the owner or [“]operator[”] of any [“]gasoline storage tank farm[”] to provide records of the analysis of [“]gasoline[”] samples to determine compliance with the provisions of subdivision [22a-174-20(a)(5)] (10) of this subsection.

[(a)(7) ~~Any [“]person[”] who samples or tests [“]gasoline[”] for the purposes of determining compliance with subdivision [22a-174-20(a)(5)] (10) of this subsection shall use the following American Society for Testing and Materials (ASTM) test methods:~~

- ~~(A) ASTM Method D323-82, “Standard Method for Vapor Pressure of Petroleum Products (Reid Method)”;~~
- ~~(B) ASTM Method D4057-81, “Standard Practice for Sampling of Petroleum and Petroleum Products”; or~~
- ~~(C) ASTM Method D270 “Standard Method of Sampling of Petroleum and Petroleum Products.”]~~

(12) Samples to be analyzed for Reid Vapor Pressure shall be collected and handled according to the applicable procedures in ASTM method D 5842–95(2000), “Standard Practice for Sampling and Handling of Fuels for Volatility Measurement.”

(13) Reid Vapor Pressure shall be determined using ASTM standard test method ASTM D5191, except that the following correlation equation shall be used:

$$\underline{RVP \text{ psi} = (0.956 * X) - 0.347.}$$

~~[(a)(8) The owner or operator of any “tank” which uses the control devices specified in subparagraphs 22a-174-20(a)(2)(A) or (a)(2)(D) shall ensure that such “tank” meets the requirements of subparagraphs (A) through (F) of this subdivision.~~

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

~~(B) All 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 in actual use; and~~

~~(ii) automatic bleeder vents are closed at all times except when the roof is being floated off or being landed on the roof leg supports; and~~

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

~~(C) Routine inspections are conducted through roof hatches once per month.~~

~~(D) A complete inspection of cover and seal is conducted whenever the “tank” is emptied for non-operational reasons but in any event at least once per year; and~~

~~(E) Records of the average monthly storage temperature, true vapor pressure, monthly throughput and type of volatile organic compounds stored are maintained and kept for a minimum of two (2) years after such record is made.~~

~~(F) Records of the results of the inspections conducted under subparagraphs (C) and (D) of this subdivision are maintained and kept for a minimum of two (2) years after such record is made.~~

~~(a)(9) Compliance with the requirements regarding the total area of gaps under subparagraph 22a-174-20(a)(2)(D) 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 0.32 CM (1/8 in.) uniform diameter probe passes freely (without forcing or binding against the seal) between the seal and the tank wall and summing the area of the individual gaps. Any person who proposes to conduct this test shall notify the Department's Air Compliance Unit not less than thirty (30) days before the test so the Department may, at its option, observe the test.~~

~~(a)(10) The owner or operator of any tank with a capacity in excess of 40,000 gallons and which is equipped with an external floating roof shall maintain records of the average monthly storage temperature, the type of liquid stored and its vapor pressure, for any “volatile organic compound” with a vapor pressure under actual storage conditions which is greater than 1.0 pounds per square inch but less than 1.5 pounds per square inch.]~~

Sec 2. Subdivision (b)(1) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(1) [Additional definitions] Definitions. For the purposes of this subsection the following definition shall apply:

- (A) “Approved control system” means, a vapor balance system or a vapor recovery system.
- (B) “Delivery vehicle” means a tank truck, tank-equipped trailer, railroad tank car or other mobile source equipped with a storage tank used for the transportation of gasoline from sources of supply to any stationary storage tank.
- (C) “Loading facility” means any aggregation or combination of equipment located on a premises and used to load or unload any volatile organic compound with a vapor pressure of 1.5 pounds per square inch or greater under actual storage conditions.
- (D) “Throughput” means the number of gallons delivered through all equipment at a dispensing facility or a loading facility over a specified time interval.
- (E) “Vapor balance system” means a combination of pipes or hoses that create a closed connection between the vapor spaces of an unloading tank and receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded and for which the vapor space connections on the unloading tank, the receiving tank and the pipes or hoses used are equipped with fittings that are vapor tight and that will automatically and immediately close upon disconnection so as to prevent the release of vapors. The complete system as a whole and not just the individual components shall have been tested and approved by a nationally recognized testing laboratory.
- (F) “Vapor recovery system” means a device or system of devices with attendant valves, fittings, piping, and other appurtenances incorporating a means for the incineration of vapors or the liquefaction of vapors by absorption, adsorption, condensation or other means. The complete system as a whole and not just the individual components shall have been tested and approved by a nationally recognized testing laboratory.

Sec 3. Subdivision (b)(2) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(2) No person shall load or permit the loading of any volatile organic compound with a vapor pressure of [1.5] 0.75 pounds per square inch or greater under [actual storage] standard conditions into any delivery vehicle from any loading facility with a throughput of 10,000 gallons or more in any one day unless such loading facility is equipped with a vapor collection and recovery or disposal system or its equivalent, properly installed, in good working order, and in operation, and

- (A) [the] The vapors discharged from the delivery vehicle during loading are processed by a vapor recovery system; and
- (B) [the] The amount of volatile organic compounds released to the ambient air is less than 80 milligrams per liter of liquid loaded over a six (6) hour period. To determine compliance with this requirement the reference methods and test

procedures found in Title 40 Code of Federal Regulations Part 60.503(a) and Part 60.503(c), respectively shall be used.

Sec 4. Subsection (c) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(c) [“]Volatile organic compound[”]/water separation. No [“person”] owner or operator shall use any compartment of any single or multiple compartment [“]volatile organic compound[”]/[“]waste water separator[”] which receives effluent water containing 200 gallons (760 liters) a day or more of any [“]volatile organic compound[”] with a vapor pressure of 1.5 pounds per square inch or more from any equipment processing, refining, treating, storing, or handling [“]volatile organic compounds[”] unless such compartment is equipped with one or more of the following vapor loss control devices, properly installed, in good working order, and in operation:

- (1) A container having all openings sealed and totally enclosing the liquid contents. All gauging and sampling devices shall be [gas-tight] leak-free except when gauging or sampling is taking place.
- (2) A container [equipped with a floating roof, consisting of a pontoon type, double deck type roof, or internal floating cover, which will rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof edge and container wall. All gauging and sampling devices shall be gas tight except when gauging or sampling is taking place] meeting the requirements of subparagraph (a)(2)(A) of this section.
- (3) A container equipped with a [“]vapor recovery system[”] which collects all volatile organic compound vapors discharged from the container and which processes such vapors to reduce their emissions by at least 95 per cent by weight.
- (4) A container having other equipment of equal efficiency for the purpose of [“]air pollution[”] control as required by subdivision (3) of this subsection may be approved by the [“]Commissioner[”] by permit or order.

Sec 5. Subsection (x)(12) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(12) Notice and retests.

Any evidence of leakage as described in this subsection shall also be treated as a malfunction of control equipment or methods as described in section 22a-174-7. Corrective actions shall be taken in accordance with the provisions of subsection [22a-174-7(c)] 22a-174-7(a). A retest in accordance with the provisions of subdivision [(x)(8)] (8) of [section 22a-174-20] this subsection must be performed immediately after all required repairs are complete.