

Sec. 22a-174-30a. Stage I Vapor Recovery.

(a) **Definitions.** For the purposes of this section, the definitions provided in this subsection shall apply. Terms used in this section that are not defined in this subsection are as defined in section 22a-174-1 of the Regulations of Connecticut State Agencies.

(1) “CARB” means the State of California Air Resources Board;

(2) “CARB-approved” means a Stage I vapor recovery system or system component that is or has been tested and approved by CARB as an individual component or as part of an approved system or that is or has been tested and approved by another state using testing methods approved by CARB;

(3) “Construct” means to install or replace all storage tanks with a capacity greater than 250 gallons, the product piping and the vent piping at a GDF during a single project;

(4) “Delivery elbow” means a quick connect/disconnect type coupler that joins a hose from a delivery vehicle to a GDF’s storage tank riser pipe adaptor or coupler;

(5) “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 a source of supply to any stationary storage tank;

(6) “Gasoline” means any petroleum distillate or petroleum distillate and alcohol blend commercially known or sold as “gasoline” and commonly used as an internal combustion engine fuel;

(7) “Gasoline dispensing facility” or “GDF” means any site where gasoline is transferred to motor vehicles from a stationary storage tank with a capacity of 250 gallons or more;

(8) “Modified” means the addition, alteration, replacement or retrofit of a gasoline storage tank located at a GDF or any component fixed to such gasoline storage tank including, but not limited to, piping that contains gasoline or gasoline vapors and containments located over or on the gasoline storage tank;

(9) “Stage I vapor recovery system” means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading delivery vehicle and a receiving GDF storage tank such that vapors displaced from the GDF storage tank are transferred to the delivery vehicle tank;

(10) “Throughput” means the number of gallons of gasoline delivered into motor vehicles at a GDF over a specified period of time;

(11) “Two-point Stage I vapor recovery system” means a GDF storage tank possessing an entry port for a gasoline fill pipe and a separate exit port for a vapor-return connection; and

(12) “Vapor-tight” means not capable of allowing the passage of gases at the pressures encountered.

(b) **Applicability.**

(1) This section applies to the owner or operator of any GDF that has a monthly throughput of 10,000 gallons or more on or after July 1, 2015. If a GDF ever exceeds a monthly throughput of 10,000 gallons, the requirements of this section shall thereafter apply.

(2) Monthly throughput shall be calculated by adding the volume of gasoline dispensed at the GDF during the current day with the volume of gasoline dispensed at the GDF during the previous 364 days, and dividing that sum by 12. For any GDF constructed after July 1, 2014, the initial calculation of monthly throughput shall be performed on or after 365 days

after the date the GDF starts dispensing gasoline to motor vehicles.

(3) For a GDF with multiple storage tanks, the requirements of this section apply only to a storage tank with a capacity of 250 gallons or greater.

(4) The owner or operator of a GDF that does not meet the monthly throughput requirements of subdivision (1) of this subsection shall maintain a chronological register of daily throughput of gasoline to demonstrate that this section does not apply. Such records shall be maintained for five (5) years from the date of creation and be made available to the Commissioner or the Administrator upon request. An owner or operator shall make records available to the Commissioner or the Administrator no later than three (3) business days after receiving such a request.

(c) Requirements.

(1) No owner or operator of a GDF shall transfer or allow the transfer of gasoline between a delivery vehicle and a GDF stationary storage tank unless such stationary storage tank is equipped with a Stage I vapor recovery system that includes:

(A) A CARB-approved fill adapter; and

(B) A pressure/vacuum vent valve on each GDF storage tank vent pipe.

(2) Any pressure/vacuum vent valve installed on and after July 1, 2015 shall be a CARB-approved pressure/vacuum vent valve.

(3) The pressure specifications for any pressure/vacuum vent valve shall be as follows:

(A) For any pressure/vacuum vent valve installed prior to July 1, 2015:

(i) A positive pressure setting of:

(I) 3.0 inches of water, plus or minus 0.5 inch, or

(II) 2.5 to 6.0 inches of water, and

(ii) A vacuum setting of 8.0 inches of water, plus or minus 2.0 inches; and

(B) For any pressure/vacuum vent valve installed on and after July 1, 2015:

(i) A positive pressure setting of 2.5 to 6.0 inches of water,

(ii) A negative pressure setting of 6.0 to 10.0 inches of water, and

(iii) The total leak rate of all pressure/vacuum vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.

(4) Except as provided in subdivision (5) of this subsection, a GDF storage tank shall be equipped with a two-point Stage I vapor recovery system. The vapor exit port of the two-point Stage I vapor recovery system shall be designed and maintained to seal in a manner that will prevent the discharge of gasoline vapors to the atmosphere when the vapor return hose is disconnected.

(5) An owner or operator of any GDF storage tank that does not have an available port to install a two-point Stage I vapor recovery system shall install a two-point Stage I vapor recovery system when the GDF storage tank is replaced or when the product in the tank is switched from any other fuel to gasoline.

(6) In addition to the requirements of subdivisions (1) to (5), inclusive, of this subsection, an owner or operator of any GDF that has a monthly throughput of 100,000 gallons or more shall install, operate and maintain a Stage I vapor recovery system that meets the requirements of subparagraphs (A) to (F), inclusive, of this subdivision. If a GDF ever exceeds a monthly throughput of 100,000 gallons, the requirements of this subdivision shall

thereafter apply.

(A) All vapor line connections on the GDF storage tank shall be equipped with closures that seal upon disconnect;

(B) The Stage I vapor control system shall be designed such that the pressure in the delivery vehicle tank does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer;

(C) The vapor recovery and product adaptors and the method of connection with the delivery elbow shall be designed to prevent the over-tightening or loosening of fittings during normal delivery operations;

(D) If a gauge well is separate from the fill tube, the gauge well shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as the fill pipe;

(E) Liquid fill connections and vapor couplings shall be equipped with vapor-tight caps; and

(F) The Stage I vapor recovery system shall be capable of meeting the static pressure performance requirement of the following equation when pressure decay testing is performed as required by subsection (d) of this section:

$$Pf = 2e^{-500.887/v}$$

Where:

Pf = Minimum allowable final pressure, inches of water

v = Total ullage affected by the test, gallons

e = Dimensionless constant equal to approximately 2.718.

(d) Testing.

(1) The owner or operator of any GDF shall conduct each of the following tests at least once per calendar year:

(A) For every pressure/vacuum vent valve, a pressure/vacuum vent valve test as specified in subdivision (4) of this subsection;

(B) A pressure decay test as specified in subdivision (5) of this subsection; and

(C) A vapor-space tie-in test as specified in subdivision (7) of this subsection.

(2) The owner or operator of any GDF constructed on and after July 1, 2015 shall conduct the tests identified in subdivision (1) of this subsection within sixty (60) days of initial operation.

(3) The owner or operator of any GDF modified on and after July 1, 2015 shall conduct the tests identified in subdivision (1) of this subsection within sixty (60) days of completion of the modification.

(4) Pressure/vacuum vent valve tests shall be conducted according to the current version of CARB TP-201.1E, *Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves*, as may be revised from time to time, or another test method approved by the Commissioner and the Administrator.

(5) Pressure decay tests shall be conducted according to the current version of CARB TP-201.3, *Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities*, as may be revised from time to time, or another test method approved by the Commissioner and the Administrator.

(6) The owner or operator of any GDF subject to 40 CFR 63.11120 may use the test

methods specified in 40 CFR 63.11120 in lieu of the method specified in subdivision (4) or subdivision (5) of this subsection.

(7) Vapor-space tie-in tests shall be conducted according to the current version of CARB TP-201.3C, *Determination of Vapor Piping Connections to Underground Gasoline Storage Tanks (Tie-Tank Test)*, as may be revised from time to time, or another method test approved by the Commissioner and the Administrator.

(8) The owner or operator of any GDF who has installed a pressure management or vapor control device on a storage tank with a capacity of 250 gallons or greater, other than a device that is required to be installed and tested by this section, shall test such device annually by a method approved by the commissioner. At least sixty (60) days prior to conducting an annual test, the owner or operator shall submit a test protocol for review and approval on a form provided by the commissioner.

(9) Any owner or operator of any GDF shall:

(A) Notify the Department's Bureau of Air Management, Field Operations Section in writing of the time and location of a test required by this subsection at least seven (7) business days in advance; and

(B) Submit a copy of the test report on a form provided by the Department to the Department's Bureau of Air Management, Field Operations Section within ten (10) days after performing a test required by this subsection.

(10) If an owner or operator of any GDF fails any test required by this subsection, the owner or operator shall take corrective actions and retest no later than sixty (60) days after failing the test.

(e) **Record keeping.**

(1) Any owner or operator of a GDF shall maintain the following records:

(A) All licenses, as defined in section 4-166 of the Connecticut General Statutes, to construct or operate the GDF or to construct or operate a specific system at the GDF;

(B) All records and results of tests performed pursuant to subsection (d) of this section, including the date of the testing and the names, addresses, and phone numbers of the persons who performed the tests;

(C) A record of any maintenance or repair conducted on any part of the Stage I vapor recovery system, including a description of the maintenance or repair performed, identification of any part repaired or replaced on such Stage I vapor recovery system, the dates the maintenance or repair was performed, and a general description of the location of any part repaired or replaced;

(D) A chronological file of all inspection reports issued by a representative of the Commissioner or the Administrator for inspections performed at the GDF;

(E) A chronological file of all compliance records, including orders, warnings and notices of violations, issued by a representative of the Commissioner or the Administrator; and

(F) A chronological register of daily throughput.

(2) In addition to the applicable records required by subdivision (1) of this subsection, any owner or operator of a GDF constructed after July 1, 2014 shall maintain records of the dates of the construction and the date gasoline was first dispensed to a motor vehicle.

(3) Records required by this subsection shall be made available to the Commissioner or the Administrator upon request. An owner or operator shall make records available to the

Regulations of Connecticut State Agencies

Commissioner or the Administrator no later than three (3) business days after receiving such a request.

(4) Records shall be maintained for five (5) years from the date of creation.

(5) An owner or operator shall display in a conspicuous location at the GDF the address at which the records required by subdivision (1) of this subsection are maintained.

(Effective July 8, 2015)