

5-253.5 Stage I Vapor Recovery Controls at Gasoline Dispensing Facilities

(a) Applicability.

(1) This section shall apply to all *gasoline dispensing facilities* and the appurtenant equipment necessary to a *gasoline dispensing facility*, except as provided below.

(2) Except for the requirement in subsection (c)(1)(i) that the filling of *gasoline storage tanks* shall be by *submerged fill only*, *gasoline dispensing facilities* which receive deliveries from *account trucks* only are exempt from the provisions of this section. (ii)

(3) Once a *gasoline dispensing facility* becomes subject to subsection (e) of this section because of an increase in *monthly gasoline throughput*, it shall remain so, even if the throughput falls below the applicability threshold.

(4) *Gasoline dispensing facilities* are also required to comply with "National Emission Standards for Hazardous Air Pollutants from Source Category: Gasoline Dispensing Facilities", 40 CFR Part 63, Subpart CCCCC.

(b) Definitions. For the purpose of this subsection, the following definitions apply, in addition to those of Section 5-101 of this chapter:

"*Account truck*" means a delivery truck with a capacity of less than 4,000 gallons which delivers *gasoline* to businesses, retail outlets and farms.

"*Dual-point Stage I vapor recovery system*" means a type of *Stage I vapor recovery system* in which the *gasoline storage tank* is equipped with an entry port for a *gasoline fill pipe* and a separate exit port for a vapor connection.

"*Monthly gasoline throughput*" means the total volume of *gasoline* that is loaded into, or dispensed from, all *gasoline storage tanks* at each *gasoline dispensing facility* during a month. Monthly throughput is calculated by summing the volume of *gasoline* loaded into, or dispensed from, all *gasoline storage tanks* at each *gasoline dispensing facility* during the current day, plus the total volume of *gasoline* loaded into, or dispensed from, all *gasoline storage tanks* at each *gasoline dispensing facility* during the previous 364 days, and then dividing that sum by 12.

"*Stage I vapor recovery system*" means a system in which *gasoline vapors* are forced from the storage tank into a *vapor-tight gasoline tank truck* or *vapor collection and control system* through direct displacement by the *gasoline* loaded into the storage tank.

"*Startup*" means the setting in operation of a *gasoline dispensing facility* subject to this section or a portion of a *gasoline dispensing facility* subject to this section for any purpose.

(c) Standards.

(1) The owner or operator of a *gasoline dispensing facility* subject to this section which receives deliveries of *gasoline* into *gasoline storage tanks* from a *gasoline tank truck* shall install, operate and maintain a *Stage I vapor recovery system* that meets the following design criteria:

- (i) The filling of gasoline storage tanks shall be by submerged fill only;
- (ii) All vapor lines on the gasoline storage tank are equipped with closures that seal upon disconnect;
- (iii) The Stage I vapor recovery system shall not cause the pressure in the gasoline tank truck to exceed 18 inches of water pressure or 5.9 inches of water vacuum during product transfer;
- (iv) At gasoline dispensing facilities employing dual-point Stage I vapor recovery, the vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations;
- (v) If a gauge well separate from the fill tube is used, it shall be provided with a drop tube that extends to within 6 inches of the bottom of the gasoline storage tank;
- (vi) All liquid fill connections on gasoline storage tanks shall be equipped with vapor-tight caps;
- (vii) Pressure/vacuum (PV) vent valves shall be installed on the gasoline storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at the 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;
- (viii) The Stage I vapor recovery system shall be capable of meeting the static pressure performance requirement of the following equation:

$$P_f = 2e(-500.887/v)$$

Where:

P_f = Minimum allowable final pressure, inches of water.

v = Total ullage affected by the test, gallons.

e = Dimensionless constant equal to approximately 2.718

2 = The initial pressure, inches of water

The pressure performance requirement can also be determined from the table in Appendix G of these regulations;

(ix) Any gasoline dispensing facility that is a newly constructed source, is a reconstructed source, or installs a new gasoline storage tank or tanks after July 1, 2015 shall equip all its gasoline storage tanks with a dual-point Stage I vapor recovery system at the time specified in subsection (g)(3) of this section.

(2) During the transfer of gasoline from the gasoline tank truck to the gasoline storage tank, the owner or operator of a gasoline tank truck delivering gasoline to a gasoline dispensing facility subject to this subsection shall ensure that:

- (i) (i) All hoses in the *vapor balance system* are properly connected;
- (ii) The adaptors or couplers that attach to the vapor line on the *gasoline storage tank* have closures that seal upon disconnect;
- (iii) All vapor return hoses, couplers and adapters used in the *gasoline delivery* are *vapor-tight*;
- (iv) All vapor return equipment on the *gasoline tank truck* is compatible with the *Stage I vapor recovery system* installed on the *gasoline storage tank*;
- (v) All hatches on the *gasoline tank truck* are closed and securely fastened; and
- (vi) The filling of *gasoline storage tanks* at *gasoline dispensing facilities* is limited to unloading by *vapor-tight gasoline tank trucks*. Documentation that the *gasoline tank truck* is a *vapor tight gasoline tank truck* shall be carried on the tank truck. This documentation shall include test results of the pressure and vacuum tests.

(3) The owner or operator must, at all times, operate and maintain any *gasoline dispensing facility* subject to this section, including associated air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the *Air Pollution Control Officer* which may include, but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the *gasoline dispensing facility*.

(4) The owner or operator of any *gasoline dispensing facility* subject to this section must not allow *gasoline* to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

- (i) Minimize *gasoline* spills;
- (ii) Clean up spills as expeditiously as practicable;
- (iii) Cover all open *gasoline* containers and all *gasoline storage tank fill-pipes* with a gasketed seal when not in use; and
- (iv) Minimize *gasoline* sent to open waste collection systems that collect and transport *gasoline* to reclamation and recycling devices, such as oil/water separators.

(d) Inspection requirements

(1) Each month, the owner or operator of a *gasoline dispensing facility* subject to this section shall inspect the *Stage I vapor recovery system* as follows:

- (i) Check for the presence of PV vent valves and any visible damage;

(ii) Check each fill adaptor cap for the presence of a gasket and tightness of fit;

(iii) Check each vapor adaptor (dry break or poppet valve) to ensure the poppet valve depresses and reseats properly and makes a tight seal with the vapor adaptor valve seat;

(iv) Check each vapor adaptor cap for the presence of a gasket and tightness of fit.

(2) Each calendar year, but no sooner than 10 months after the prior annual inspection, the owner or operator of a gasoline dispensing facility subject to this section shall inspect the Stage I vapor recovery system as follows:

(i) Check each fill adaptor to ensure it is threaded tightly onto the riser pipe;

(ii) Check each vapor adaptor to ensure it is threaded tightly onto the riser pipe;

(iii) Check the in-tank monitor caps for tightness of fit and check the probe wire grommet to ensure it is sealed tightly around the probe wire;

(iv) Check any spill bucket drain valves for a tight seal;

(v) Other components identified by the Air Pollution Control Officer.

(3) Any component of the Stage I vapor recovery system identified as missing, worn, or ineffective during an inspection required by subsection (d) (1) or (2) shall be repaired or replaced by the owner or operator of the gasoline dispensing facility to ensure the vapor-tight integrity and efficiency of the Stage I vapor recovery system. An initial attempt to repair or replace any missing, worn or ineffective component shall be made as soon as practical. The defective component shall be repaired or replaced within 15 calendar days after the inspection that found the deficiency. If repair or replacement is not completed within 15 days, the owner or operator shall immediately notify the Air Pollution Control Officer of the reason(s) that the defective component cannot be repaired or replaced, and the Air Pollution Control Officer may authorize additional time for the repair or replacement.

(e) Testing.

(1) The owner or operator of any gasoline dispensing facility with a monthly gasoline throughput of 100,000 gallons/month or greater shall conduct and pass the following tests on the gasoline dispensing facility's Stage I vapor recovery system every three years beginning no later than 90 days after the effective date of this regulation:

(i) A pressure decay test performed in accordance with:

(A) California Air Resources Board Vapor Recovery Test Procedure TP-201.3 - Determination of 2-Inch WC static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996 and amended March 17, 1999;

(B) Bay Area Air Quality Management District Source Test Procedure ST-30 - Static Pressure Integrity Test - Underground Storage Tanks, adopted November 30, 1983 and Amended December 31, 1994; or

(C) An alternative method as approved by the *Air Pollution Control Officer* and *EPA*.

(ii) A leak rate and cracking pressure test on any pressure/vacuum vent valves performed in accordance with:

(A) California Air Resources Board Vapor Recovery Test Procedure TP-201.1E - Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003

(B) An alternative method as approved by the *Air Pollution Control Officer* and *EPA*.

(2) The *owner* or *operator* of a *gasoline dispensing facility* subject to this subsection shall notify the *Air Pollution Control Officer* at least 5 calendar days in advance as to when the testing in subsection (e)(1)(i) or (ii) will occur and what party will conduct the testing.

(3) A copy of the test results shall be submitted to the *Air Pollution Control Officer* within 30 calendar days of completion of the above testing.

(4) An *owner* or *operator* who performs and passes all testing required by subsection (e)(1) of this section, on or before September 1 of the appropriate year will be considered to be in compliance for that year with the requirement for an annual inspection in subsection (d)(2) of this section.

(5) The *Air Pollution Control Officer* may require the *owner* or *operator* of a *gasoline dispensing facility* to conduct tests at any reasonable time to determine compliance with this section. The *Air Pollution Control Officer* or the *Officer's* representative may also conduct testing at any reasonable time for the same purpose.

(f) Record keeping and Reporting.

(1) The *owner* or *operator* of a *gasoline dispensing facility* shall maintain monthly records showing the quantity of all *gasoline* delivered to the site. Upon request by the *Air Pollution Control Officer* or *EPA*, the *owner* or *operator* of a *gasoline dispensing facility* shall document to the Agency the *monthly gasoline throughput* at the *gasoline dispensing facility* in the manner prescribed by the *Air Pollution Control Officer*.

(2) The *owner* or *operator* of a *gasoline dispensing facility* shall maintain records of the monthly inspections of the *Stage I vapor recovery system* in a format approved by the *Air Pollution Control Officer*;

(3) Each record required to be kept by this section shall be maintained by the *owner* or *operator* of the facility for a minimum of five years. These records shall be made available for inspection by representatives of the Agency during normal business hours and copies shall be provided to such representatives, to the *Air Pollution Control Officer*, or *EPA* upon request;

(4) By December 31 of each year, the *owner* or *operator* of a *gasoline dispensing facility* shall document and certify to the Agency compliance with subsection (d)(2) of this section in a manner prescribed by the *Air Pollution Control Officer*.

(g) Compliance.

(1) The owner or operator of any gasoline dispensing facility subject to this section shall comply with this section on or before July 1, 2015, except as provided below.

(2) The owner or operator of any gasoline dispensing facility that is a newly constructed or reconstructed source for which construction commences after July 1, 2015 shall comply with this section upon startup of the facility.

(3) The owner or operator of a gasoline dispensing facility shall comply with subsection (c)(1)(ix) of this section regarding equipping its gasoline storage tanks with a dual-point Stage I vapor recovery system as follows:

(i) Any gasoline dispensing facility that is a newly constructed or reconstructed source for which construction commences after July 1, 2015 shall comply with subsection (c)(1)(ix) of this section upon startup of the facility.

(ii) Any gasoline dispensing facility existing on July 1, 2015 at which a new gasoline storage tank or tanks are installed shall comply with subsection (c)(1)(ix) of this section upon startup of operation of the first new tank.

(4) The owner or operator of a gasoline dispensing facility that becomes subject to the requirements in subsection (e) of this section regarding testing because of an increase in monthly gasoline throughput shall comply with subsection (e) of this section by the end of the first calendar year following the year in which the monthly gasoline throughput exceeded 100,000 gallons. Testing shall continue to be conducted every 3 years after the testing is first required to be conducted and passed.