

## PART 229

## PETROLEUM AND VOLATILE ORGANIC LIQUID STORAGE AND TRANSFER

(Statutory authority: Environmental Conservation Law, § 19-0301)

Sec.	Sec.
229.1 Applicability and compliance	229.4 Testing and monitoring
229.2 Definitions	229.5 Recordkeeping
229.3 Control requirements	

## Historical Note

Part (§§ 229.1-229.7) filed July 24, 1979; repealed, new (§§ 229.1-229.10) filed March 12, 1985; amds. filed: March 5, 1993 eff. 30 days after filing; April 2, 1993 eff. April 4, 1993. Amended Part title.

**Section 229.1 Applicability and compliance.** (a) The owner or operator of a gasoline bulk plant, gasoline loading terminal, marine loading vessel, petroleum liquid storage tank or volatile organic liquid storage tank which meets the current applicability criteria must submit a permit to construct or a certificate to operate prior to commencing construction and/or operation of the process, as required by Part 201 of this Title, which includes the method or methods which will be used to comply with the control requirements of this Part.

(b) The owner or operator of the following types of sources located at facilities in the New York City metropolitan area which emit volatile organic compounds must comply with this Part according to the following schedule:

## (1) Existing requirements:

(i) any petroleum liquid fixed roof tank with a capacity of 40,000 gallons or more must have demonstrated compliance with the requirements of this Part by October 1, 1982;

(ii) any petroleum liquid external floating roof tank with a capacity of 40,000 gallons or more must have been in compliance with the requirements of this Part by January 11, 1986;

(iii) any gasoline bulk plant must have been in compliance with the requirements of this Part by July 1, 1982; and

(iv) any gasoline loading terminal must have been in compliance with the requirements of this Part by July 1, 1982.

## (2) New requirements:

(i) any volatile organic liquid fixed roof tank with capacities greater than or equal to 20,000 gallons with a maximum true vapor pressure greater than or equal to 4.0 psia up to and including tanks with capacities greater than or equal to 40,000 gallons with a maximum true vapor pressure greater than or equal to 1.0 psia must meet the requirements of the compliance schedule in subdivision (g) of this section and control requirements of section 229.3(e)(1) of this Part;

(ii) any volatile organic liquid external floating roof tank with capacities greater than or equal to 40,000 gallons with a maximum true vapor pressure greater than or equal to 1.5 psia must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2) of this Part;

(iii) any volatile organic liquid storage tank with a capacity greater than 10,000 gallons but less than 20,000 gallons located at a facility with annual potential to emit

volatile organic compounds from all sources regardless of process type, but excluding combustion installations, of 25 tons or greater must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2)(iv) of this Part;

(iv) any volatile organic liquid storage tank with a capacity less than 10,000 gallons located at a facility with an annual potential to emit volatile organic compounds from all sources regardless of process type, but excluding combustion installations, of 25 tons or greater must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2)(v) of this Part;

(v) any marine vessel loading facility which loads petroleum liquids to a marine delivery vessel at a gasoline loading terminal must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(f) of this Part;

(vi) any process described in subparagraph (i)-(v) of this paragraph constructed after March 1, 1993 which meets the current applicability criteria of this subdivision must demonstrate compliance upon start-up.

(c) The owner or operator of the following types of sources located at facilities in the Lower Orange County metropolitan area must comply with this Part according to the following schedule:

(1) Existing requirements:

(i) any petroleum liquid fixed roof tank with a capacity of 40,000 gallons or more located at a facility with annual potential to emit volatile organic compounds of 100 tons or more must have been in compliance with the requirements of this Part by October 1, 1982;

(ii) any petroleum liquid external floating roof tank with a capacity of 40,000 gallons or more with an annual potential to emit volatile organic compounds of 100 tons or more must have been in compliance with the requirements of this Part by January 11, 1986;

(iii) any gasoline bulk plant with an average daily throughput of 20,000 gallons or less must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(c) of this Part;

(iv) any gasoline loading terminal with an average daily throughput of 40,000 gallons or more of gasoline must have been in compliance with the requirements of this Part by July 1, 1982.

(2) New requirements:

(i) any petroleum liquid fixed roof storage tank with a capacity of 40,000 gallons or more must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(a) of this Part;

(ii) any petroleum liquid external floating roof storage tank with a capacity of 40,000 gallons or more must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(b) of this Part;

(iii) any gasoline bulk plant with an average daily throughput of 20,000 gallons or less must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(c) of this Part;

(iv) any gasoline loading terminal with an average daily throughput of 20,000 gallons or more must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(d) of this Part;

(v) any volatile organic liquid fixed roof storage tank with capacities greater than or equal to 20,000 gallons with a maximum true vapor pressure greater than or equal to 4.0 psia up to and including tanks with capacities greater than or equal to 40,000 gallons with a maximum true vapor pressure greater than or equal to 1.0 psia must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3 (e)(1) of this Part;

(vi) any volatile organic liquid external floating roof tank with capacities greater than or equal to 40,000 gallons with a maximum true vapor pressure greater than or equal to 1.5 psia must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2)(i)-(iii) of this Part, as appropriate;

(vii) any volatile organic liquid storage tank with a capacity greater than 10,000 gallons but less than 20,000 gallons located at a facility with annual potential to emit volatile organic compounds from all sources regardless of process type, but excluding combustion installations, of 25 tons or greater must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2)(iv) of this Part;

(viii) any volatile organic liquid storage tank with a capacity less than 10,000 gallons located at a facility with an annual potential to emit volatile organic compounds from all sources regardless of process type, but excluding combustion installations, of 25 tons or greater must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2)(v) of this Part; and

(ix) any marine delivery vessel loading facility which loads petroleum liquids to a marine delivery vessel at a gasoline loading terminal must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(f) of this Part;

(x) any process described in subparagraphs (i)-(ix) of this paragraph which is constructed after March 1, 1993 and meets the current applicability criteria of this subdivision must demonstrate compliance upon start-up.

(d) The owner or operator of any of the following types of sources located at facilities in other than the New York City metropolitan area or the Lower Orange County metropolitan area which were designated as nonattainment areas for ozone on or after August 23, 1979, which includes the counties of Albany, Cayuga, Columbia, Dutchess, Erie, Genesee, Greene, Livingston, Monroe, Niagara, Onondaga, Ontario, Orange county (excluding the towns of Blooming Grove, Chester, Highlands, Monroe, Tuxedo, Warwick, and Woodbury), Orleans, Putnam, Rensselaer, Saratoga (limited to the towns of Clifton Park and Halfmoon, the City of Mechanicville, and the town and village of Waterford), Schenectady, Seneca, Ulster, Wayne, Wyoming or Yates, must comply with this Part according to the following schedule:

(1) Existing requirements:

(i) any petroleum liquid fixed roof storage tank with a capacity of 40,000 gallons or more located at a facility with annual potential to emit volatile organic compounds of 100 tons or more must have been in compliance with the requirements of this part by October 1, 1982;

(ii) any petroleum liquid external floating roof storage tank with a capacity of 40,000 gallons or more must have been in compliance with the requirements of this Part by January 11, 1986;

(iii) any gasoline bulk plant with an average daily throughput of 40,000 gallons of gasoline or less must have been in compliance with the requirements of this Part by July 1, 1982;

(iv) any gasoline loading terminal with an average daily throughput of greater than 40,000 gallons of gasoline or with an emission rate potential of volatile organic compounds of 100 tons or more must have been in compliance with the requirements of this Part by July 1, 1982.

(2) New requirements:

(i) any petroleum liquid fixed roof storage tank with a capacity of 40,000 gallons or more must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(a) of this Part;

(ii) any petroleum liquid external floating roof storage tank with a capacity of 40,000 gallons or more must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(b) of this Part;

(iii) any gasoline bulk plant with an average daily throughput of 20,000 gallons or less must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(c) of this Part;

(iv) any gasoline loading terminal with an annual throughput of 20,000 gallons or more must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(d) of this Part;

(v) any volatile organic liquid fixed roof storage tank with capacities greater than or equal to 20,000 gallons with a maximum true vapor pressure greater than or equal to 4.0 psia up to and including tanks with capacities greater than or equal to 40,000 gallons with a maximum true vapor pressure greater than or equal to 1.0 psia must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(1) of this Part;

(vi) any volatile organic liquid external floating roof tank with capacities greater than or equal to 40,000 gallons with a maximum true vapor pressure greater than or equal to 1.5 psia must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2)(i)-(iii) of this Part, as appropriate;

(vii) any volatile organic liquid storage tank with a capacity greater than 10,000 gallons but less than 20,000 gallons located at a facility with annual potential to emit volatile organic compounds from all sources regardless of process type, but excluding combustion installations, of 50 tons or greater must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2)(iv) of this Part;

(viii) any volatile organic liquid storage tank with a capacity less than 10,000 gallons located at a facility with an annual potential to emit volatile organic compounds from all sources regardless of process type, but excluding combustion installations, of 50 tons or more must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2)(v) of this Part;

(ix) any marine vessel loading facility which loads petroleum liquids to a marine delivery vessel at a gasoline loading terminal must meet the requirements of the

compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(f) of this Part; and

(x) any process described in subparagraphs (i)-(ix) of this paragraph which is constructed after March 1, 1993 and meets the current applicability criteria of this subdivision must demonstrate compliance upon start-up.

(e) The owner or operator of the following types of sources located at facilities in other than the areas listed in subdivision (a), (b) or (c) of this section must comply with this Part according to the following schedule:

(1) any petroleum liquid fixed roof storage tank with a capacity of 40,000 gallons or more must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(a) of this Part;

(2) any petroleum liquid external floating roof storage tank with a capacity of 40,000 gallons or more must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(b) of this Part;

(3) any gasoline bulk plant must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(c) of this Part;

(4) any gasoline loading terminal must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(d) of this Part;

(5) any volatile organic liquid fixed roof storage tank with capacities greater than or equal to 20,000 gallons with a maximum true vapor pressure greater than or equal to 4.0 psia up to and including tanks with capacities greater than or equal to 40,000 gallons with a maximum true vapor pressure greater than or equal to 1.0 psia must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(1) of this Part;

(6) any volatile organic liquid external floating roof tank with capacities greater than or equal to 40,000 gallons with a maximum true vapor pressure greater than or equal to 1.5 psia must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2)(i)-(iii) of this Part, as appropriate;

(7) any volatile organic liquid storage tank with a capacity greater than 10,000 gallons but less than 20,000 gallons located at a facility with annual potential to emit volatile organic compounds from all sources regardless of process type, but excluding combustion installations, of 50 tons or greater must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2)(iv) of this Part;

(8) any volatile organic liquid storage tank with a capacity less than 10,000 gallons located at a facility with an annual potential to emit volatile organic compounds from all sources regardless of process type, but excluding combustion installations, of 50 tons or greater must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(e)(2)(v) of this Part;

(9) any marine vessel loading facility which loads petroleum liquids to a marine delivery vessel at a gasoline loading terminal must meet the requirements of the compliance schedule in subdivision (g) of this section and the control requirements of section 229.3(f) of this Part; and

(10) any process described in paragraphs (1)-(9) of this subdivision which is constructed after March 1, 1993 and meets the current applicability criteria of this subdivision must demonstrate compliance upon start-up.

(f) This Part shall not apply to:

(1) pressurized fixed roof tanks which are capable of maintaining a working pressure at all times to prevent emissions of volatile organic compound to the outdoor atmosphere;

(2) external floating roof tanks which are of welded construction and are equipped with a metallic-type shoe primary seal and a secondary seal from the top of the shoe seal to the tank wall;

(3) external floating roof tanks which are used for the storage of a petroleum or volatile organic liquid with a true vapor pressure less than 4.0 psia (27.6kPa), are of welded construction and are equipped with one of the following:

(i) a metallic-type shoe seal;

(ii) a liquid-mounted foam seal;

(iii) a liquid-mounted liquid-filled type seal; or

(iv) equivalent control equipment or device;

(4) horizontal petroleum or volatile organic liquid storage tanks;

(5) petroleum or volatile organic liquid storage tanks storing waxy, heavy crudes, vessels storing crude oil or condensate prior to custody transfer, or vessels located at bulk gasoline plants controlled by a vapor balance system; and

(6) volatile organic liquid storage tanks subject to Part 233 of this Title.

(g) *Compliance schedule.* The owner or operator of processes subject to this Part must:

(1) submit a permit to construct or certificate to operate for sources previously exempted by Part 201 of this Title to the Department of Environmental Conservation by May 15, 1993;

(2) submit a compliance plan to the Department of Environmental Conservation by November 15, 1993, which contains a schedule of the steps necessary for the facility to achieve compliance with this Part or reduce its annual potential to emit below the applicability criteria and the dates by which each step will be completed;

(3) marine vessel loading facilities must be in compliance with this Part or reduce its daily throughput below the applicability criteria by November 15, 1994;

(4) all other sources must be in compliance with this Part or have had its permits modified to limit its annual potential to emit below the applicability criteria by June 1, 1995; and

(5) the sources must maintain the VOC control requirements included in any existing permit, regulation, rule, administrative order, or any judicial order until compliance with the provisions of this Part is demonstrated to the satisfaction of the commissioner.

(h) Any owner or operator of gasoline bulk plant, gasoline loading terminal, marine loading vessel, petroleum liquid storage tank or volatile organic liquid storage tank,

which are not regulated by this Part must comply with all other applicable Parts of this Subchapter.

#### Historical Note

Sec. filed July 24, 1979; amd. filed May 22, 1980; repealed, new filed March 12, 1985; renum. 229.2, new filed: March 5, 1993 eff. 30 days after filing; April 2, 1993 eff. April 4, 1993.

**229.2 Definitions.** (a) For the purpose of this Part, the general definitions of Part 200 of this Title apply.

(b) For the purpose of this Part, the following definitions also apply:

(1) *Annual*. Refers to a period of time based upon a calendar year commencing January 1st and terminating midnight December 31st.

(2) *Annual throughput*. The amount of petroleum or volatile organic liquid transferred into or dispensed from a defined source or facility during 12 consecutive months.

(3) *Barrel*. A unit of measurement equal to 42 gallons.

(4) *Daily throughput*. The average daily amount of petroleum or volatile organic liquid transferred into or dispensed from a defined source or facility. The daily throughput is calculated by dividing the annual throughput by the number of workdays during the 12-month period, which begins on January 1st and ends on December 31st.

(5) *Equivalent control*. The use of alternate operational and/or equipment controls that have been approved by the commissioner for the reduction of petroleum or volatile organic liquid vapor emissions such that the aggregate emissions of petroleum or volatile organic liquid vapor from the facility do not exceed those from the application of defined reasonably available control technology.

(6) *External floating roof tank*. An open top tank with a cover or roof which rests or floats above the petroleum or volatile organic liquid in the tank and is equipped with one or more closure seals between the roof edge and tank wall.

(7) *Fixed roof storage tank*. A petroleum or volatile organic liquid storage vessel consisting of a vertical steel cylindrical shell with a permanent affixed roof.

(8) *Gasoline*. Any petroleum distillate having a Reid vapor pressure of four pounds per square inch (28 kilopascals) or higher, used as a motor fuel.

(9) *Gasoline bulk plant*. A gasoline storage and distribution facility with an average daily throughput of 20,000 gallons of gasoline or less. A gasoline dispensing site subject to Part 230 of this Title is not considered to be a gasoline bulk plant.

(10) *Gasoline loading terminal*. A gasoline storage and distribution facility with an average daily throughput of greater than 20,000 gallons of gasoline. A gasoline dispensing site subject to Part 230 of this Title is not considered to be a gasoline loading terminal.

(11) *Gasoline transport vehicle*. Any delivery vessel, tank truck, trailer, or railroad tank car, with a capacity of 300 gallons or more, used for the transportation of gasoline.

(12) *Internal floating roof tank*. A fixed roof tank with a cover or roof which rests or floats upon the petroleum or volatile organic liquid in the tank and is equipped with one or more closure seals between the roof edge and tank wall.

(13) *Liquid-mounted seal*. A primary seal mounted in continuous contact with the liquid between the tank wall and the floating roof around the circumference of the tank.

(14) *Lower Orange County metropolitan area.* The area including the towns of Blooming Grove, Chester, Highlands, Monroe, Tuxedo, Warwick, and Woodbury.

(15) *Marine delivery vessel.* Any vessel which is specifically constructed or converted to transport liquid cargo in tanks, which is designed to move on water, including but not limited to, barges and tankers. This does not include water borne vessels containing only tanks designed to carry liquid necessary for operation of the vessel.

(16) *Metallic shoe seal.* A petroleum or volatile organic liquid storage vessel seal, which consists of a metal sheet held vertically against the tank wall by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric spans the annular space between the metal sheet and the floating roof.

(17) *Petroleum liquid.* Any crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery whose true vapor pressure is between 1.5 and 12 psia (10.5-83 kilopascals) at 70°F. Petroleum liquids do not include Nos. 2 through 6 fuel oils or those volatile organic compounds which are given an environmental rating of A pursuant to Part 212 of this Title.

(18) *Potential to emit.* The maximum capacity of an air contamination source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant, including air pollution control equipment and/or restriction on the hours of operation, or on the type or amount of material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in enforceable permit conditions. Fugitive emissions, to the extent that they are quantifiable, are included in determining the potential to emit.

(19) *Storage tank.* Any vessel, reservoir or container used for the storage of petroleum and/or volatile organic liquids.

(20) *True vapor pressure.* The equilibrium partial pressure exerted by a petroleum or volatile organic liquid at 70°F. True vapor pressure of a petroleum or volatile organic liquid is to be determined by methods acceptable to the commissioner. The methods described in Bulletin 2517 of the American Petroleum Institute (API) are considered to be acceptable methods for determining true vapor pressure for petroleum liquids.

(21) *Vapor-mounted seal.* A primary seal, mounted so there is a ring-shaped vapor space beneath the seal, bounded by the bottom of the primary seal, the tank wall, the liquid surface and the floating roof.

(22) *Volatile organic liquid.* Any organic liquid including, but not limited to, liquids that produce vapors which participate in atmospheric photochemical reactions, or which are measured by an applicable test method, but excluding petroleum liquids. The following are not considered to be volatile organic liquids for the purpose of this regulation: Gasoline, Nos. 2 through 6 fuel oil, commercial and military grades of diesel and aviation fuels and those compounds specifically exempted from the definition of volatile organic compound in Part 200 of this Title.

#### Historical Note

Sec. filed July 24, 1979; amd. filed May 22, 1980; repealed, new filed March 12, 1985; repealed, new added by renum. and amd. 229.1, filed: March 5, 1993 eff. 30 days after filing; April 2, 1993 eff. April 4, 1993.

**229.3 Control requirements.** (a) *Petroleum fixed roof tanks.* No person may store petroleum liquid in a fixed roof tank subject to this Part unless:

(1) the tank has been retrofitted with an internal floating roof or equivalent control; and

(2) the vapor collection and vapor control systems are maintained and operated in such a way as to ensure the integrity and efficiency of the system.

(b) *Petroleum liquid external floating roof tanks.* No person may store petroleum liquid in an external floating roof tank subject to this Part unless:

(1) the tank has been fitted with a continuous rim-mounted secondary seal extending from the floating roof to the tank wall, or equivalent control;

(2) all seal closure devices meet the following requirements:

(i) there are no visible holes, tears or openings in the seal or seal fabric;

(ii) the seal is intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall; and

(iii) for vapor-mounted primary seals, the accumulated area of gaps exceeding one-eighth inch (0.32 cm) in width between the secondary seal and the tank wall must not exceed 1.0 square inch per foot of diameter (21.2 cm<sup>2</sup> per meter);

(3) the roof is to be floating on the liquid at all times, off the leg supports, except during initial fill and when the tank is completely emptied and subsequently refilled;

(4) all openings in the external floating roof, except automatic bleeder vents, rim space vents and leg sleeves, are equipped with projections into the tank that remain below the liquid surface at all times, and covers, seals or lids in the closed position except when the openings are in actual use;

(5) automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof supports or at the manufacturer's recommended setting;

(6) emergency roof drains are provided with slotted membrane fabric covers, or equivalent, which cover at least 90 percent of the area of the opening;

(7) an annual inspection is performed by the owner or his agent, including but not limited to, a visual inspection of the secondary seal;

(8) annual measurements of the secondary seal gap are performed by the owner or his agent when the floating roof is equipped with a vapor-mounted primary seal. Measurements will be made of the length and width of all gaps around the entire circumference of the secondary seal in each place where a one-eighth inch uniform diameter probe passes freely between the seal and tank wall, and summing the area of the individual gaps; and

(9) records are maintained of the dates and results of the annual inspections and annual secondary seal gap measurements required by this section.

(c) *Gasoline bulk plants.* No person may load gasoline into a gasoline transport vehicle from any gasoline bulk plant subject to this Part unless the gasoline bulk plant provides:

(1) for submerged filling of gasoline transport vehicles;

(2) that for delivery of that gasoline to a gasoline-dispensing site required to be equipped with a stage I vapor collection device, the following requirements must be met:

(i) the gasoline bulk plant provides for submerged filling of the gasoline transport vehicles;

(ii) the gasoline bulk plant has a vapor collection system to control gasoline vapors which are displaced during the loading of a gasoline bulk plant storage tank and/or during the loading of gasoline transport vehicles;

(iii) the pressure vacuum relief valves and hatch covers for storage tanks and gasoline transport vehicles, and the associated vapor and liquid lines used during dispensing operations at the gasoline bulk plant, do not leak, and the pressure relief valves on storage tanks and gasoline transport vehicles are adjusted to release at not less than 0.7 psia, unless a State or local fire code requires a lower pressure; and

(iv) the vapor collection system is maintained and operated in such a way as to ensure the efficiency and integrity of the system;

(3) a vapor collection system required at a gasoline bulk plant consists of:

(i) a vapor space connection on the gasoline storage tank equipped with vapor-tight fittings that automatically and immediately close upon disconnection to prevent the release of gasoline vapors;

(ii) a connecting pipe or hose equipped with vapor-tight fittings that systematically and immediately close upon disconnection to prevent the release of volatile organic compounds when loading is through means other than hatches. Hatch-loading systems must include a loading arm with a vapor collection system adapter, a vapor-tight seal between the adapter and hatch, and a method of preventing drainage of liquid gasoline from the loading arm when it is removed from the hatch or for complete drainage of the loading arm before such removal;

(iii) a vapor space connection on the gasoline transport vehicle equipped with vapor-tight fittings that automatically and immediately close upon disconnection to prevent the release of gasoline vapors when loading is through means other than hatches;

(iv) a connecting device between the gasoline transport vehicle and the dispensing equipment that interrupts the flow of gasoline to prevent overfilling and spillage; and

(v) a system that prevents the flow of gasoline into gasoline transport vehicles unless the fuel product line and vapor collection system are both connected so as to prevent liquid product leaks or vapor loss;

(4) the design of any connecting devices required by this Part to control gasoline vapor emissions while loading gasoline transport vehicles at a gasoline bulk plant must be standardized to provide compatibility between different bulk plants and transport vehicles; or connecting adapters must be provided and used. The owner or operator of the gasoline bulk plant is responsible for ensuring that the adapter is properly connected before dispensing gasoline. Connecting adapters must be adequate to ensure that the vapor collection system is vapor-tight.

(d) *Gasoline loading terminals.* No person subject to this Part may load gasoline into a gasoline transport vehicle from any gasoline loading terminal unless the gasoline loading terminal is equipped with gasoline vapor collection and vapor control systems which are operating and in good working order and that satisfy the following requirements:

(1) The gasoline vapor collection and control systems must capture gasoline vapors during loading and unloading of gasoline transport vehicles, and must condense, absorb, adsorb or combust the gasoline vapors so emissions do not exceed 0.67 pounds per 1,000 gallons of gasoline loaded or unloaded. Any equivalent control system is acceptable. Test methods to determine the level of gasoline vapors which are acceptable to the commissioner must be used to determine compliance with this standard. Test methods described in Appendix A of 40 CFR part 60 are considered to be acceptable methods (see table 1, section 200.9 of this Title).

(2) A vapor collection system required at a gasoline loading terminal consists of:

(i) hatch-loading systems must include a loading arm with a vapor collection system adapter, a vapor-tight seal between the adapter and hatch, and a method of preventing drainage of liquid gasoline from the loading arm when it is removed from the hatch or for complete drainage of the loading arm before such removal;

(ii) bottom-loading systems must include a connecting pipe or hose equipped with vapor-tight fittings that will automatically and immediately close upon disconnection to prevent the release of gasoline vapors;

(iii) a connecting device between the gasoline transport vehicle and the dispensing equipment that interrupts the flow of gasoline to prevent overfilling and spillage; and

(iv) a system that prevents the flow of gasoline into gasoline transport vehicles unless the fuel product line and vapor collection system are both connected so as to prevent liquid product leaks or vapor loss.

(e) *Volatile organic liquid storage tanks.* No person may store volatile organic liquids in a tank subject to this Part unless:

(1) For a fixed roof storage tank, the tank is equipped with an internal floating roof with a liquid-mounted primary seal and gasketed fittings, or equivalent control. Replacement of other than liquid mounted seals is to be performed when the tank is cleaned and gas-freed for other purposes.

(2) For an external floating roof tank, the tank must be equipped with the control equipments as follows:

(i) for external floating roof storage tanks equipped with a mechanical shoe primary seal, the tank must be equipped with a rim-mounted secondary seal or equivalent control;

(ii) for external roof storage tanks equipped with vapor-mounted primary, the tank must be equipped with a liquid-mounted primary seal and a rim-mounted secondary seal or equivalent control;

(iii) for external roof storage tanks equipped with liquid-mounted seals, the tank must be equipped with a rim-mounted secondary seal or equivalent control when the tank is cleaned and degassed for other reasons;

(iv) for volatile organic liquid tanks with a capacity greater than or equal to 10,000 gallons but less than 20,000 gallons, the tank must be equipped with submerged fill; and

(v) for volatile organic liquid tanks with a capacity of less than 10,000 gallons, the tank must be equipped with conservation vents.

(f) *Marine vessel loading facilities.* No person subject to this Part may load gasoline in a marine vessel unless:

(1) Facilities loading 15,000 gallons of gasoline or less per day must be equipped with and operate a vapor balance system or other control system. Such a vapor balance system must have no open operating system to the atmosphere during transfer and must not return the vapors to any tank equipped with a floating roof.

(2) Facilities loading more than 15,000 gallons of gasoline per day must be equipped with and operate a vapor control system which reduces the total VOC emissions to the outdoor atmosphere by 90 percent by weight.

(g) (1) The commissioner may allow processes subject to this Part to operate with a lesser degree of control than what is required provided that a process specific reasonably available control technology (RACT) demonstration has been made to the satisfaction of the commissioner. Process specific RACT demonstrations must be submitted with the application for a permit to construct, a certificate to operate, or renewal of a certificate to operate for an existing source under the provisions of Part 201 of this Title. Such process specific RACT demonstrations must be submitted to the United States Environmental Protection Agency as a revision to the State Implementation Plan and must address the technical and economic feasibility of:

(i) utilizing demonstrated and proven emission control technologies which would achieve the degree of control required in subdivisions (a)-(f) of this section;

(ii) utilizing demonstrated and proven emission control technologies which would not achieve the degree of control required in subdivisions (a)-(f) of this section; and

(iii) utilizing demonstrated and proven production modification methods which would result in real, documented, and enforceable reductions in the volatile organic compound emissions from the process.

(2) Facilities with processes subject to this Part with an annual potential to emit less than five tons of volatile organic compounds will only be required to comply with subparagraph (1)(i) and (1)(iii) of this subdivision in order to demonstrate that a lesser degree of control is RACT for these processes.

(h) The commissioner may allow sources which use natural gas fired afterburners as control devices for processes subject to this Part, to shut down these natural gas fired afterburners from November 1st through March 31st for the purposes of natural gas conservation, provided that the commissioner has determined that this action will not jeopardize air quality. Such evidence must be submitted with the application for a permit to construct, a certificate to operate, or renewal of a certificate to operate for an existing source under the provisions of Part 201 of this Title.

#### Historical Note

Sec. filed July 24, 1979; amd. filed May 22, 1980; repealed, new filed: March 12, 1985; March 5, 1993 eff. 30 days after filing; April 2, 1993 eff. April 4, 1993.

**229.4 Testing and monitoring.** (a) The owner and/or operator of a vapor collection and control system must follow notification requirements, protocol requirements and test procedures of Part 202 of this Title for testing and monitoring to determine compliance with the emission limits and control requirements required of this Part. Depending upon conditions at a test site, one of the following test methods from Appendix A of 40 CFR part 80 (see table 1, section 200.9 of this Title) must be used to determine volatile organic compound (VOC) concentrations of a gas stream at the inlet and outlet of a control device:

(1) Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography.

(2) Method 25, Determination of Total Gaseous Organic Emissions as Carbon.

(3) Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer.

(4) Methods not listed above must be approved in advance by the department's representative and the United States Environmental Protection Agency.

(b) Any facility which is not subject to the control requirements of this Part because its annual potential to emit volatile organic compounds are below the applicability levels, must maintain records in a format acceptable to the commissioner's representative

that verify the facility's annual potential to emit VOC. Upon request, these records must be submitted to the department.

**Historical Note**

Sec. filed July 24, 1979; repealed, new filed: May 22, 1980; March 12, 1985; March 5, 1993 eff. 30 days after filing; April 2, 1993 eff. April 4, 1993.

**229.5 Recordkeeping.** The owner or operator of a gasoline bulk plant, gasoline loading terminal, petroleum liquid storage tank, marine loading vessel facility, or volatile organic liquid storage tank subject to this Part must maintain the following records at the facility for a period of five years:

(a) capacities of petroleum liquid storage tanks subject to section 229.3(a) or (b) of this Part, in gallons;

(b) average daily gasoline throughput per day for gasoline bulk plants subject to section 229.3(c) of this Part, in gallons;

(c) average daily gasoline throughput for gasoline loading terminals subject to section 229.3(d) of this Part, in gallons per year;

(d) capacities of volatile organic liquid storage tanks, subject to section 229.3(e) of this Part in gallons; and

(e) daily gasoline throughput for marine vessel loading facilities subject to section 229.3(f) of this Part, in gallons.

**Historical Note**

Sec. filed July 24, 1979; repealed, new filed: March 12, 1985; March 5, 1993 eff. 30 days after filing; April 2, 1993 eff. April 4, 1993.

**§ 229.6**

**Historical Note**

Sec. filed July 24, 1979; amd. filed May 22, 1980; repealed, new filed March 12, 1985; repealed, filed: March 5, 1993 eff. 30 days after filing; April 2, 1993 eff. April 4, 1993.

**§ 229.7**

**Historical Note**

Sec. filed July 24, 1979; amd. filed May 22, 1980; repealed, new filed March 12, 1985; repealed, filed: March 5, 1993 eff. 30 days after filing; April 2, 1993 eff. April 4, 1993.

**229.8-229.10**

**Historical Note**

Secs. filed March 12, 1985; repealed, filed: March 5, 1993 eff. 30 days after filing; April 2, 1993 eff. April 4, 1993.