

Nonvapor tight means any tank truck, railcar, or marine vessel that does not pass the required vapor-tightness test.

Process heater means a device that transfers heat liberated by burning fuel to fluids contained in tubes, except water that is heated to produce steam.

Steam generating unit means any enclosed combustion device that uses fuel energy in the form of steam.

Vapor collection system means any equipment located at the affected facility used for containing benzene vapors displaced during the loading of tank trucks, railcars, or marine vessels. This does not include the vapor collection system that is part of any tank truck, railcar, or marine vessel vapor collection manifold system.

Vapor-tight marine vessel means a marine vessel with a benzene product tank that has been demonstrated within the preceding 12 months to have no leaks. This demonstration shall be made using method 21 of part 60, appendix A, during the last 20 percent of loading and during a period when the vessel is being loaded at its maximum loading rate. A reading of greater than 10,000 ppm as methane shall constitute a leak. As an alternative, a marine vessel owner or operator may use the vapor-tightness test described in § 61.304(f) to demonstrate vapor tightness. A marine vessel operated at negative pressure is assumed to be vapor-tight for the purpose of this standard.

Vapor-tight tank truck or vapor-tight railcar means a tank truck or railcar for which it has been demonstrated within the preceding 12 months that its product tank will sustain a pressure change of not more than 750 pascals within 5 minutes after it is pressurized to a minimum of 4,500 pascals. This capability is to be demonstrated using the pressure test procedure specified in method 27 of part 60, appendix A, and a pressure measurement device which has a precision of ± 2.5 mm water and which is capable of measuring above the pressure at which the tank truck or railcar is to be tested for vapor tightness.

§ 61.302 Standards.

(a) The owner or operator of an affected facility shall equip each loading

rack with a vapor collection system that is:

(1) Designed to collect all benzene vapors displaced from tank trucks, railcars, or marine vessels during loading, and

(2) Designed to prevent any benzene vapors collected at one loading rack from passing through another loading rack to the atmosphere.

(b) The owner or operator of an affected facility shall install a control device and reduce benzene emissions routed to the atmosphere through the control device by 98 weight percent. If a boiler or process heater is used to comply with the percent reduction requirement, then the vent stream shall be introduced into the flame zone of such a device.

(c) The owner or operator of an affected facility shall operate any flare used to comply with paragraph (b) of this section in accordance with the requirements of § 60.18 (b) through (f).

(d) The owner or operator of an affected facility shall limit loading of benzene into vapor-tight tank trucks and vapor-tight railcars using the following procedures:

(1) The owner or operator shall obtain the vapor-tightness documentation described in § 61.305(h) for each tank truck or railcar loaded at the affected facility. The test date in the documentation must be within the preceding 12 months. The vapor-tightness test to be used for tank trucks and railcars is method 27 of part 60, appendix A.

(2) The owner or operator shall cross-check the identification number for each tank truck or railcar to be loaded with the file of vapor-tightness documentation before the corresponding tank truck or railcar is loaded. If no documentation is on file, the owner or operator shall obtain a copy of the information from the tank truck or railcar operator before the tank truck or railcar is loaded.

(3) Alternate procedures to those described in paragraphs (d)(1) and (d)(2) of this section may be used upon application to, and approval by, the Administrator.

(e) The owner or operator of an affected facility shall limit the loading of marine vessels to those vessels that

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are vapor tight as determined by either paragraph (e)(1), (e)(2), (e)(3), or (e)(4) of this section.

(1) The owner or operator of an affected facility shall ensure that each marine vessel is loaded with the benzene product tank below atmospheric pressure (i.e., at negative pressure). If the pressure is measured at the interface between the shoreside vapor collection pipe and the marine vessel vapor line, the pressure measured according to the procedures in §61.303(f) must be below atmospheric pressure.

(2) The owner or operator of an affected facility shall use the following procedure to obtain the vapor-tightness documentation described in §61.305(h). The vapor-tightness test for marine vessels is method 21 of part 60, appendix A, and shall be applied to any potential sources of vapor leaks. A reading of 10,000 ppmv or greater as methane shall constitute a leak.

(i) The owner or operator of an affected facility shall obtain the leak test documentation described in §61.305(h) for each marine vessel prior to loading, if available. The date of the test listed in the documentation must be within the 12 preceding months.

(ii) If there is no documentation of a successful leak test conducted on the marine vessel in the preceding 12 months, the owner or operator of an affected facility shall require that a leak test of the marine vessel be conducted during the final 20 percent of loading of the marine vessel or shall not load the vessel. The test shall be conducted when the marine vessel is being loaded at the maximum allowable loading rate.

(A) If no leak is detected, the owner or operator of an affected facility shall require that the documentation described in §61.305(h) is completed prior to departure of the vessel. The owner or operator of the affected facility shall retain a copy of the vapor-tightness documentation on file.

(B) If any leak is detected, the owner or operator of an affected facility shall require that the vapor-tightness failure be documented for the marine vessel owner or operator prior to departure of the vessel. The owner or operator of the affected facility shall retain a copy of the vapor-tightness documentation

on file. Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without dry-docking the vessel. This equipment will be excluded from future method 21 tests until repairs are effected. Repair of this equipment shall occur the next time the vessel is dry-docked.

(iii) If the marine vessel has failed its most recent vapor-tightness test as described in §61.302(e)(2)(ii), the owner or operator of the affected facility shall require that the owner or operator of the nonvapor-tight marine vessel provide documentation that the leaks detected during the previous vapor-tightness test have been repaired, or proof that repair is technically infeasible without dry-docking the vessel. Once the repair documentation has been provided, the owner or operator may load the marine vessel. The owner or operator shall require that the vapor-tightness test described in §61.302(e)(2)(ii) be conducted during loading, and shall retain a copy of the vapor-tightness documentation on file.

(3) The owner or operator of an affected facility shall obtain a copy of the marine vessel's vapor-tightness documentation described in §61.305(h) for a test conducted within the preceding 12 months in accordance with §61.304(f).

(4) Alternate procedures to those described in paragraphs (e)(1), (e)(2) and (e)(3) of this section may be used upon application to, and approval by, the Administrator.

(f) The owner or operator of an affected facility shall limit loading of benzene to tank trucks, railcars, and marine vessels equipped with vapor collection equipment that is compatible with the affected facility's vapor collection system.

(g) The owner or operator of an affected facility shall limit loading of tank trucks, railcars, and marine vessels whose collection systems are connected to the affected facility's vapor collection systems.

(h) The owner or operator of an affected facility shall ensure that the vapor collection and benzene loading equipment of tank trucks and railcars

shall be designed and operated to prevent gauge pressure in the tank truck or railcar tank from exceeding, during loading, the initial pressure the tank was pressured up to and shown to be vapor tight at during the most recent vapor-tightness test using method 27 of part 60, appendix A. This vapor-tightness test pressure is not to be exceeded when measured by the procedures specified in §61.304(c).

(i) The owner or operator of an affected facility shall ensure that no pressure-vacuum vent in the affected facility's vapor collection system for tank trucks and railcars shall begin to open at a system pressure less than the maximum pressure at which the tank truck or railcar is operated.

(j) The owner or operator of an affected facility shall ensure that the maximum normal operating pressure of the marine vessel's vapor collection equipment shall not exceed 0.8 times the relief set pressure of the pressure-vacuum vents. This level is not to be exceeded when measured by the procedures specified in §61.304(d).

(k) The owner or operator of an affected facility shall inspect the vapor collection system and the control device for detectable emissions, and shall repair any leaks detected, in accordance with §61.242-11 (e) and (f). This inspection of the vapor collection system and control device shall be done during the loading of tank trucks, railcars, or marine vessels.

(l) Vent systems that contain valves that could divert a vent stream from a control device shall have car-sealed opened all valves in the vent system from the emission source to the control device, and car-sealed closed all valves in the vent system that would lead the vent stream to the atmosphere, either directly or indirectly, bypassing the control device.

§ 61.303 Monitoring requirements.

(a) Each owner or operator of an affected facility that uses an incinerator to comply with the percent reduction requirement specified under §61.302(b) shall install, calibrate, maintain, and operate according to manufacturer's specifications a temperature monitoring device equipped with a continuous recorder and having an accuracy

of ± 1 percent of the combustion temperature being measured expressed in degrees Celsius or $\pm 0.5^\circ\text{C}$, whichever is greater.

(1) Where an incinerator other than a catalytic incinerator is used, the owner or operator of the affected facility shall install a temperature monitoring device in the firebox.

(2) Where a catalytic incinerator is used, the owner or operator shall install temperature monitoring devices in the gas stream immediately before and after the catalyst bed.

(b) Each owner or operator of an affected facility that uses a flare to comply with §61.302(b) shall install, calibrate, maintain, and operate according to manufacturer's specifications a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light to indicate the presence of a flame during the entire loading cycle.

(c) Each owner or operator of an affected facility that uses a steam generating unit or process heater to comply with §61.302(b) shall comply with the following requirements. Where a steam generating unit with a design heat input capacity of less than 44 MW is used to comply with §61.302(b), the owner or operator of an affected facility shall comply with paragraph (c)(1) of this section. Where a steam generating unit or process heater with a design heat input capacity of 44 MW or greater is used to comply with §61.302(b), the owner or operator of an affected facility shall comply with paragraph (c)(2) of this section.

(1) Install in the firebox, calibrate, maintain, and operate according to manufacturer's specifications a temperature monitoring device equipped with a continuous recorder and having an accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius or $\pm 0.5^\circ\text{C}$, whichever is greater, for steam generating units or process heaters of less than 44 MW design heat input capacity.

(2) Monitor and record the periods of operation of the steam generating units or process heater if the design heat input capacity of the steam generating unit or process heater is 44 MW or greater. The records must be readily available for inspection.