Texas Chapter 115 - Control of Air Pollution from Volatile Organic Compounds.

SUBCHAPTER F : MISCELLANEOUS INDUSTRIAL SOURCES

5F3 DIVISION 3 : DEGASSING OR CLEANING OF STATIONARY, MARINE, AND TRANSPORT VESSELS
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Outline:

**********end outline**********r5j***

in particular areas of the state.

The adopted amendments implement Texas Health and Safety Code, §§382.002, 382.011, 382.012, 382.014, and 382.016.

§115.541. Emission Specifications.

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/Brazoria areas as defined in §115.10 of this title (relating to Definitions), the following emission specifications apply to degassing during or in preparation of cleaning.

(1) For all stationary volatile organic compound (VOC) storage tanks with a nominal storage capacity of one million gallons or more and after January 1, 2009, storage tanks in the Houston/Galveston/Brazoria area with a nominal storage capacity of 250,000 gallons or greater or with a nominal storage capacity of 75,000 gallons or greater storing materials with a true vapor pressure greater than 2.6 pounds per square inch absolute (psia).

(A) No person shall permit VOC emissions with a vapor space partial pressure greater than or equal to 0.5 psia (3.4 kilo Pascals (kPa)) under actual storage conditions unless the vapors are processed by a vapor control system.

(B) The vapor control system must maintain a control efficiency of at least 90%.

(C) When conducting degassing or cleaning operations, no avoidable liquid or gaseous leaks, as detected by sight or sound, may originate from the degassing or cleaning operations.

(D) The intentional bypassing of a vapor control device used during degassing or cleaning is prohibited. Any visible VOC leak originating from the vapor control device or other associated product recovery device must be repaired as soon as practical.

(2) For all transport vessels, as defined in §115.10 of this title, with a nominal storage capacity of 8,000 gallons or more.

(A) No person shall permit VOC emissions with a vapor space partial pressure greater than or equal to 0.5 psia (3.4 kPa) under actual storage conditions unless the vapors are processed by a vapor control system.

(B) The vapor control system must maintain a control efficiency of at least 90%.

(C) When conducting degassing or cleaning operations, no avoidable liquid or gaseous leaks, as detected by sight or sound, may originate from the degassing or cleaning operations.

(D) The intentional bypassing of a vapor control device used during degassing or cleaning is prohibited. Any visible VOC leak originating from the vapor control device or other associated product recovery device must be repaired as soon as practical.

(E) All transport vessels, as defined in §115.10 of this title, must be kept vapor-tight at all times until the VOC vapors remaining in the vessel are discharged to a vapor control system.

(b) For all persons in the Beaumont/Port Arthur and Houston/Galveston/Brazoria areas, the following emission specifications apply to degassing during or in preparation of cleaning for all marine vessels, as defined in §101.1 of this title (relating to Definitions), that have a nominal storage capacity of 10,000 barrels (420,000 gallons) or more and contain VOC.

(1) No person shall degas or clean a tank that carried a VOC with a vapor partial pressure greater than or equal to 0.5 psia (3.4 kPa) unless the vapors are processed by a vapor control system.

(2) The vapor control system must maintain a control efficiency of at least 90%.

(3) When conducting degassing or cleaning operations, no avoidable liquid or gaseous leaks, as detected by sight or sound, may originate from the degassing or cleaning operations.

(4) The intentional bypassing of a vapor control device used during degassing or cleaning is prohibited. Any visible VOC leak originating from the vapor control device or other associated product recovery device must be repaired as soon as possible.

(5) All marine vessels, as defined in §101.1 of this title, containing VOC must have all cargo tank closures properly secured, or maintain a negative pressure within the tank when a closure is

opened, and must have all pressure/vacuum relief valves operating within certified limits as specified by classification society or flag state until the vapors are discharged to a vapor control system if the vessel is degassed or cleaned.

§115.542. Control Requirements.

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/Brazoria areas as defined in §115.10 of this title (relating to Definitions), the following control requirements apply to stationary storage tanks and transport vessels.

(1) No person shall permit the degassing or cleaning of volatile organic compounds (VOC) from a stationary storage tank or transport vessel unless the vapors are processed by a vapor control system.

(2) When degassing or cleaning is effected through the hatches of a transport vessel with a loading arm equipped with a vapor collection adapter, then pneumatic, hydraulic, or other mechanical means must be provided to force a vapor-tight seal between the adapter and the hatch. A means must be provided to minimize liquid drainage from the degassing or cleaning device when it is removed from the hatch of any transport vessel or to accomplish drainage before such removal.

(3) When degassing or cleaning is effected through the hatches or manways of stationary VOC storage tanks, all lines must be equipped with fittings that make vapor-tight connections and that

are closed when disconnected; or equipped to permit residual VOC in the line to discharge into a recovery or disposal system after degassing or cleaning is complete.

(4) Degassing and cleaning equipment must be designed and operated to prevent avoidable VOC leaks.

(5) In the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and until January 1, 2009, in the Houston/Galveston/Brazoria areas, vapors must be routed to the control device until a turnover of at least four vapor space volumes has occurred, or four turnovers of the vapor space under a floating roof, or the partial vapor pressure is less than 0.5 pounds per square inch absolute (psia) (19,000 parts per million by weight (ppmw), or 34,000 parts per million by volume (ppmv) expressed as methane). After one of these conditions has been satisfied, the storage tank or transport vessel may be vented to the atmosphere for the remainder of the degassing or cleaning process.

(6) After January 1, 2009, in the Houston/Galveston/Brazoria area, vapors must be routed to the control device until the VOC measured concentration before the inlet to the control device is less than 34,000 ppmv as methane or less than 50% of the lower explosive limit (LEL). After this condition has been satisfied, the storage tank or transport vessel may be vented to the atmosphere for the remainder of the degassing or cleaning process provided that the VOC concentration remains below 34,000 ppmv as methane or less than 50% of the LEL. The VOC concentration must be measured once every 12 hours if the storage tank or transport vessel is vented continuously to the atmosphere, and upon restart of the degassing and cleaning operation if venting to the atmosphere has been suspended for more than four hours. If any measurements of the VOC concentration equal or exceed 34,000 ppmv as

methane or are equal to or greater than 50% of the LEL, the storage tank or transport vessel must be routed to the control device until the concentration is below 34,000 ppmv as methane or less than 50% of the LEL. While venting to the atmosphere, measurements must continue until five consecutive readings of VOC concentrations collected at 12 hour intervals are measured to be less than 34,000 ppmv or less than 50% of the LEL.

(b) For all persons in the Beaumont/Port Arthur and Houston/Galveston/Brazoria areas, the following control requirements apply to marine vessels.

(1) No person shall permit the degassing or cleaning of a marine vessel containing VOC unless the vapors are processed by a vapor control system.

(2) When degassing or cleaning is effected through the hatches of a marine vessel containing VOC with a loading arm equipped with a vapor collection adapter, then pneumatic, hydraulic, or other mechanical means must be provided to force a vapor-tight seal between the adapter and the hatch, or a negative pressure inside the cargo tank must be maintained. A means must be provided to minimize liquid drainage from the degassing or cleaning device and line when they are removed from the hatch of any marine vessel containing VOC or to accomplish drainage before such removal.

(3) Degassing and cleaning equipment must be designed and operated to prevent avoidable VOC leaks.

(4) In the Beaumont/Port Arthur area and until January 1, 2009, in the

Houston/Galveston/Brazoria area, vapors must be routed to the control device until the marine vessel is stripped VOC liquid-free and a turnover of at least four vapor space volumes has occurred, the partial vapor pressure is less than 0.5 psia (19,000 ppmw, or 34,000 ppmv expressed as methane), or the concentration of VOC is less than 20% of the LEL. After one of these conditions has been satisfied, the marine vessel may be vented to the atmosphere for the remainder of the degassing or cleaning process.

(5) After January 1, 2009, in the Houston/Galveston/Brazoria area, vapors must be routed to the control device until the VOC measured concentration before the inlet to the control device is less than 34,000 ppmv as methane or less than 50% of the LEL. After this condition has been satisfied, the marine vessel may be vented to the atmosphere for the remainder of the degassing or cleaning process provided that the VOC concentration remains below 34,000 ppmv as methane or less than 50% of the LEL. The VOC concentration must be measured once every 12 hours if the marine vessel is vented continuously to the atmosphere, and upon restart of the degassing and cleaning operation if venting to the atmosphere has been suspended for more than four hours. If any measurements of the VOC concentration equal or exceed 34,000 ppmv as methane or are equal to or greater than 50% of the LEL, the marine vessel must be routed to the control device until the concentration is below 34,000 ppmv as methane or less than 50% of the LEL. While venting to the atmosphere, measurements must continue until five consecutive readings of VOC concentrations collected at 12-hour intervals are measured to be less than 34,000 ppmv or less than 50% of the LEL.

§115.543. Alternate Control Requirements.

For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/Brazoria areas as defined in §115.10 of this title (relating to Definitions), alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division (relating to Degassing or Cleaning of Stationary, Marine, and Transport Vessels) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.

§115.544. Inspection Requirements.

For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/Brazoria areas as defined in §115.10 of this title (relating to Definitions), the following inspection requirements apply.

(1) Inspection for visible liquid leaks, visible fumes, or significant odors resulting from volatile organic compound (VOC) transfer operations must be conducted during each degassing or cleaning operation by the owner or operator of the VOC degassing and cleaning facility.

(2) VOC degassing or cleaning through the affected transfer lines must be discontinued when a leak is observed and the leak cannot be repaired within a reasonable length of time. The intentional bypassing of a vapor control device during cleaning or degassing is prohibited.

§115.545. Approved Test Methods.

For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/Brazoria areas as defined in §115.10 of this title (relating to Definitions), compliance with §115.541 and §115.542 of this title (relating to Emission Specifications and Control Requirements) must be determined by applying the following test methods, as appropriate:

(1) Test Methods 1-4 (40 Code of Federal Regulations (CFR) Part 60, Appendix A) for determining flow rates;

(2) Test Method 18 (40 CFR Part 60, Appendix A) for determining gaseous organic compound emissions by gas chromatography;

(3) Test Method 25 (40 CFR Part 60, Appendix A) for determining total gaseous nonmethane organic emissions as carbon;

(4) Test Methods 25A or 25B (40 CFR Part 60, Appendix A) for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis;

(5) additional test procedures described in 40 CFR §60.503(b), (c), and (d) (effective February 14, 1989) for determining compliance for bulk gasoline terminals;

(6) Test Method 21 (40 CFR Part 60, Appendix A) for determining volatile organic compound (VOC) leaks;

(7) determination of true vapor pressure using American Society for Testing and Materials (ASTM) Test Method D323-89, D2879, D4953, D5190, or D5191 for the measurement of Reid vapor pressure, adjusted for actual storage temperature in accordance with API Publication 2517, Third Edition, 1989;

(8) Test Method 27 (40 CFR Part 60, Appendix A) for determining tank-truck leaks;

(9) 40 CFR §63.565(c) (effective September 19, 1995) or 40 CFR §61.304(f) (effective October 17, 2000) for determination of marine vessel vapor tightness;

(10) minor modifications to these test methods approved by the executive director; or

(11) VOC concentration measurements required by §115.542(a)(6) and (b)(5) of this title (relating to Control Requirements) must be performed using one of the methods or measurement instruments listed in subparagraphs (A) - (F) of this paragraph.

(A) Test Method 21 (40 CFR Part 60, Appendix A). The instrument response factor criteria in §8.1 of the United States Environmental Protection Agency Method 21 may be determined using the average composition of the liquid in the tank rather than for each individual liquid.

(B) Test Method 18 (40 CFR Part 60, Appendix A) except that only one bag sample needs to be collected for each concentration measurement.

(C) Bag samples, provided the means of collecting the sample and the type of bag used are appropriate and representative of the type of space being sampled and the analytical method used to evaluate bag contents are appropriate for the concentration levels and compound types.

(D) Test Method 25A (40 CFR Part 60, Appendix A).

(E) Portable hydrocarbon gas analyzer using an appropriate detector that is effective in the concentration range being measured and calibrated with compounds of interest in each case. Analyzers must be calibrated and maintained according to manufacturer's specifications.

(F) Lower explosive limit detector. The detector must be calibrated and maintained according to manufacturer's specifications.

§115.546. Monitoring and Recordkeeping Requirements.

For facilities in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/Brazoria areas as defined in §115.10 of this title (relating to Definitions) affected by §115.541 and §115.542 of this title (relating to Emission Specifications and Control Requirements), the owner or operator of any volatile organic compound (VOC) degassing or cleaning facility shall maintain the following information at the facility for at least two years and shall make such information available

upon request to representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution control agency having jurisdiction in the area:

(1) for storage tank, transport vessel, or marine vessel degassing or cleaning operations:

(A) a record of the type and number of all transport vessels, stationary VOC storage tanks, and marine vessels that are degassed or cleaned at the affected facility;

(B) the chemical name and estimated liquid quantity of VOC contained in each vessel prior to degassing or cleaning;

(C) the chemical name and estimated liquid quantity of VOC removed from each storage tank, transport vessel, or marine vessel; and

(D) after January 1, 2009, in the Houston/Galveston/Brazoria area, a record of the measurements of VOC concentration or percent of lower explosive limit from the storage tank, transport vessel, or marine vessel being degassed while the tank or vessel is vented to the atmosphere;

(2) for vapor control systems:

(A) continuous monitoring and recording of the exhaust gas temperature immediately downstream of a direct-flame incinerator;

(B) continuous monitoring and recording of the inlet and outlet gas temperature of a catalytic incinerator; and

(C) continuous monitoring and recording of the exhaust gas VOC concentration for carbon adsorption systems that contain facilities to regenerate the carbon bed directly, as defined in §115.10 of this title (relating to Definitions); or periodic monitoring of the exhaust gas VOC as specified by 40 Code of Federal Regulations §61.354(d) (effective October 17, 2000), of any carbon adsorption system that does not regenerate the carbon bed directly, to determine breakthrough;

(3) the results of any leak inspection and repair conducted in accordance with the provisions specified in §115.544 of this title (relating to Inspection Requirements); and

(4) the results of any testing conducted in accordance with the provisions specified in §115.545 of this title (relating to Approved Test Methods).

§115.547. Exemptions.

For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/Brazoria areas as defined in §115.10 of this title (relating to Definitions), the following exemptions apply.

(1) Degassing or cleaning any storage tank, transport vessel, or marine vessel with a vapor space partial pressure less than 0.5 pounds per square inch absolute (psia) (3.4 kilo Pascals) of

volatile organic compound (VOC) under actual storage conditions is exempt from the requirements of this division (relating to Degassing or Cleaning of Stationary, Marine, and Transport Vessels).

(2) Degassing or cleaning any transport vessel with a nominal storage capacity of less than 8,000 gallons, or any stationary VOC storage tank with a nominal storage capacity of less than 1 million gallons, or any marine vessel with a nominal storage capacity of less than 10,000 barrels (420,000 gallons), is exempt from the requirements of this division. After January 1, 2009, stationary VOC storage tanks in the Houston/Galveston/Brazoria area with a nominal storage capacity and vapor pressure of stored liquid as listed in subparagraphs (A) and (B) of this paragraph are no longer exempt from the requirements of this division.

(A) Storage tanks with nominal storage capacity greater than or equal to 250,000 gallons but less than 1 million gallons.

(B) Storage tanks with nominal storage capacity greater than or equal to 75,000 gallons but less than 250,000 gallons storing materials with true vapor pressure greater than 2.6 psia.

(3) Any stationary VOC storage tank during preventative maintenance, roof repair, primary seal inspection, or removal and installation of a secondary seal, if product is not moved in or out of the storage tank, emissions are minimized, and the repair is completed within seven calendar days, is exempt from the requirements of this division.

(4) Any marine vessel that has sustained damage that prevents a cargo tank's opening from being properly secured, causes the onboard vapor recovery system to be inoperative, or prevents the pressure/vacuum relief valves from operating within certified limits as specified by classification society or flag state is exempt from §115.541(b) and §115.542(b) of this title (relating to Emission Specifications and Control Requirements); however, all reasonable measures must be taken to minimize VOC emissions.

(5) Any oceangoing, self-propelled marine vessel is exempt from the degassing or cleaning requirements of this division.

§115.549. Counties and Compliance Schedules.

(a) All affected persons in the Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, and Waller Counties shall continue to comply with this division (relating to Degassing or Cleaning of Stationary, Marine, and Transport Vessels) as required by §115.930 of this title (relating to Compliance Dates).

(b) All affected persons in Collin, Dallas, Denton, and Tarrant Counties shall be in compliance with this division as soon as practicable, but no later than one year, after the commission publishes notification in the Texas Register of its determination that this contingency rule is necessary as a result of failure to attain the national ambient air quality standard (NAAQS) for ozone by the attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the Federal Clean Air Act (FCAA), §172(c)(9).

(c) All affected persons in El Paso County shall be in compliance with this division as soon as practicable, but no later than one year, after the commission publishes notification in the Texas Register of its determination that this contingency rule is necessary as a result of failure to attain the NAAQS for ozone by the attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the FCAA, §172(c)(9).

(d) All affected persons in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall comply with the requirements in §115.542(a)(6) and (b)(5), and §115.546(1)(D) of this title (relating to Control Requirements and Monitoring and Recordkeeping Requirements) as soon as practicable but no later January 1, 2009.