SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES
DIVISION 1: STORAGE OF VOLATILE ORGANIC COMPOUNDS
§§115.110 - 115.119
Effective June 25, 2015

§115.110. Applicability and Definitions.

(a) Applicability. Except as specified in §115.111 of this title (relating to Exemptions), this division applies to any storage tank in which volatile organic compounds are placed, stored, or held that is located in:

(1) the Beaumont-Port Arthur area, as defined in §115.10 of this title (relating to Definitions);

(2) the Dallas-Fort Worth area, as defined in §115.10 of this title;

(3) the El Paso area, as defined in §115.10 of this title;

(4) the Houston-Galveston-Brazoria area, as defined in §115.10 of this title; and

(5) Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties.

(b) Definitions. Unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10 of this title (relating to Definitions, respectively), the terms in this division have the meanings commonly used in the field of air pollution control. In addition, the following meanings apply in this division unless the context clearly indicates otherwise.

(1) Closure device--A piece of equipment that covers an opening in the roof of a fixed roof storage tank and either can be temporarily opened or has a component that provides a temporary opening. Examples of closure devices include, but are not limited to, thief hatches, pressure relief valves, pressure-vacuum relief valves, and access hatches.

(2) Deck cover--A device that covers an opening in a floating roof deck. Some deck covers move horizontally relative to the deck (i.e., a sliding cover).

(3) Flexible enclosure system--A system that includes all of the following: a flexible device that completely encloses the slotted guidepole and eliminates the hydrocarbon vapor emission pathway from inside the tank through the guidepole slots to the outside air; a guidepole cover at the top of the guidepole; and a well cover

positioned at the top of the guidepole well that seals any openings between the well cover and the guidepole (e.g., pole wiper), any openings between the well cover and any other objects that pass through the well cover, and any other openings in the top of the guidepole well.

(4) Incompatible liquid--A liquid that is a different chemical compound, a different chemical mixture, a different grade of liquid material, or a fuel with different regulatory specifications provided that the chemical compound, chemical mixture, grade of liquid material, or fuel would be unusable for its intended purpose due to contamination from the previously stored liquid.

(5) Internal sleeve emission control system--An emissions control system that includes all of the following: an internal guidepole sleeve that eliminates the hydrocarbon vapor emission pathway from inside the tank through the guidepole slots to the outside air; a guidepole cover at the top of the guidepole; and a well cover positioned at the top of the guidepole well that seals any openings between the well cover and the guidepole (e.g., pole wiper), any openings between the well cover and any other objects that pass through the well cover, and any other openings in the top of the guidepole well.

(6) Pipeline breakout station--A facility along a pipeline containing storage vessels used to relieve surges or receive and store crude oil or condensate from the pipeline for reinjection into the pipeline and continued transportation by pipeline or to other facilities.

(7) Pole float--A float located inside a guidepole that floats on the surface of the stored liquid. The rim of the float has a wiper or seal that extends to the inner surface of the pole.

(8) Pole sleeve--A device that extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening. The sleeve must extend into the stored liquid.

(9) Pole wiper--A seal that extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening.

(10) Slotted guidepole--A guidepole or gaugepole that has slots or holes through the wall of the pole. The slots or holes allow the stored liquid to flow into the pole at liquid levels above the lowest operating level.

(11) Storage capacity--The volume of a storage tank as determined by multiplying the internal cross-sectional area of the tank by the average internal height of the tank shell.

(12) Storage tank--A stationary vessel, reservoir, or container used to store volatile organic compounds. This definition does not include: components that are not directly involved in the containment of liquids or vapors; subsurface caverns or porous rock reservoirs; or process tanks or vessels.

(13) Tank battery--A collection of equipment used to separate, treat, store, and transfer crude oil, condensate, natural gas, and produced water. A tank battery typically receives crude oil, condensate, natural gas, or some combination of these extracted products from several production wells for accumulation and separation prior to transmission to a natural gas plant or petroleum refinery. A collection of storage tanks at a pipeline breakout station, petroleum refinery, or petrochemical plant is not considered to be a tank battery.

(14) Vapor recovery unit--A device that transfers hydrocarbon vapors to a fuel liquid or gas system, a sales liquid or gas system, or a liquid storage tank.

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§115.111. Exemptions.

(a) The following exemptions apply 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), except as noted in paragraphs (2), (4), (6), (7), and (9) - (11) of this subsection.

(1) Except as provided in §115.118 of this title (relating to Recordkeeping Requirements), a storage tank storing volatile organic compounds (VOC) with a true vapor pressure less than 1.5 pounds per square inch absolute (psia) is exempt from the requirements of this division.

(2) A storage tank with storage capacity less than 210,000 gallons storing crude oil or condensate prior to custody transfer in the Beaumont-Port Arthur or El Paso areas is exempt from the requirements of this division. This exemption no longer applies in the Dallas-Fort Worth area beginning March 1, 2013.

(3) A storage tank with a storage capacity less than 25,000 gallons located at a motor vehicle fuel dispensing facility is exempt from the requirements of this division.

(4) A welded storage tank in the Beaumont-Port Arthur, El Paso, and Houston-Galveston-Brazoria areas with a mechanical shoe primary seal that has a secondary seal from the top of the shoe seal to the tank wall (a shoe-mounted secondary seal) is exempt from the requirement for retrofitting with a rim-mounted secondary seal

if the shoe-mounted secondary seal was installed or scheduled for installation before August 22, 1980.

(5) An external floating roof storage tank storing waxy, high pour point crude oils is exempt from any secondary seal requirements of §115.112(a), (d), and (e) of this title (relating to Control Requirements).

(6) A welded storage tank in the Beaumont-Port Arthur, El Paso, and Houston-Galveston-Brazoria areas storing VOC with a true vapor pressure less than 4.0 psia is exempt from any external floating roof secondary seal requirement if any of the following types of primary seals were installed before August 22, 1980:

(A) a mechanical shoe seal;

(B) a liquid-mounted foam seal; or

(C) a liquid-mounted liquid filled type seal.

(7) A welded storage tank in the Beaumont-Port Arthur, El Paso, and Houston-Galveston-Brazoria areas storing crude oil with a true vapor pressure equal to or greater than 4.0 psia and less than 6.0 psia is exempt from any external floating roof secondary seal requirement if any of the following types of primary seals were installed before December 10, 1982:

(A) a mechanical shoe seal;

(B) a liquid-mounted foam seal; or

(C) a liquid-mounted liquid filled type seal.

(8) A storage tank with storage capacity less than or equal to 1,000 gallons is exempt from the requirements of this division.

(9) In the Houston-Galveston-Brazoria area, a storage tank or tank battery storing condensate, as defined in §101.1 of this title (relating to Definitions), prior to custody transfer with a condensate throughput exceeding 1,500 barrels (63,000 gallons) per year on a rolling 12-month basis is exempt from the requirement in §115.112(d)(4) or (e)(4)(A) of this title, to control flashed gases if the owner or operator demonstrates, using the test methods specified in §115.117 of this title (relating to Approved Test Methods), that uncontrolled VOC emissions from the individual storage tank, or from the aggregate of storage tanks in a tank battery, are less than 25 tons per year on a rolling 12-month basis.

(10) In the Dallas-Fort Worth area, except Wise County, a storage tank or tank battery storing condensate prior to custody transfer with a condensate throughput exceeding 3,000 barrels (126,000 gallons) per year on a rolling 12-month basis is exempt from the requirement in §115.112(e)(4)(B)(i) of this title, to control flashed gases if the owner or operator demonstrates, using the test methods specified in §115.117 of this title, that uncontrolled VOC emissions from the individual storage tank, or from the aggregate of storage tanks in a tank battery, are less than 50 tons per year on a rolling 12-month basis. This exemption no longer applies 15 months after the date the commission publishes notice in the *Texas Register* as specified in §115.119(b)(1)(C) of this title (relating to Compliance Schedules) that the Dallas-Fort Worth area has been reclassified as a severe nonattainment area for the 1997 Eight-Hour Ozone National Ambient Air Quality Standard.

(11) In the Dallas-Fort Worth area, except in Wise County, on or after the date specified in §115.119(b)(1)(C) of this title, a storage tank or tank battery storing condensate prior to custody transfer with a condensate throughput exceeding 1,500 barrels (63,000 gallons) per year on a rolling 12-month basis is exempt from the requirement in §115.112(e)(4)(B)(ii) of this title, to control flashed gases if the owner or operator demonstrates, using the test methods specified in §115.117 of this title, that uncontrolled VOC emissions from the individual storage tank, or from the aggregate of storage tanks in a tank battery, are less than 25 tons per year on a rolling 12-month basis.

(12) In Wise County, a storage tank or tank battery storing condensate prior to custody transfer with a condensate throughput exceeding 6,000 barrels (252,000 gallons) per year on a rolling 12-month basis is exempt from the requirement in §115.112(e)(4)(C) of this title, to control flashed gases if the owner or operator demonstrates, using the test methods specified in §115.117 of this title, that uncontrolled VOC emissions from the individual storage tank, or from the aggregate of storage tanks in a tank battery, are less than 100 tons per year on a rolling 12-month basis.

(b) The following exemptions apply in Gregg, Nueces, and Victoria Counties.

(1) Except as provided in §115.118 of this title, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.

(2) A storage tank with storage capacity less than 210,000 gallons storing crude oil or condensate prior to custody transfer is exempt from the requirements of this division.

(3) A storage tank with storage capacity less than 25,000 gallons located at a motor vehicle fuel dispensing facility is exempt from the requirements of this division.

(4) A welded storage tank with a mechanical shoe primary seal that has a secondary seal from the top of the shoe seal to the tank wall (a shoe-mounted secondary seal) is exempt from the requirement for retrofitting with a rim-mounted secondary seal if the shoe-mounted secondary seal was installed or scheduled for installation before August 22, 1980.

(5) An external floating roof storage tank storing waxy, high pour point crude oils is exempt from any secondary seal requirements of §115.112(b) of this title.

(6) A welded storage tank storing VOC with a true vapor pressure less than 4.0 psia is exempt from any external secondary seal requirement if any of the following types of primary seals were installed before August 22, 1980:

(A) a mechanical shoe seal;

(B) a liquid-mounted foam seal; or

(C) a liquid-mounted liquid filled type seal.

(7) A welded storage tank storing crude oil with a true vapor pressure equal to or greater than 4.0 psia and less than 6.0 psia is exempt from any external secondary seal requirement if any of the following types of primary seals were installed before December 10, 1982:

(A) a mechanical shoe seal;

(B) a liquid-mounted foam seal; or

(C) a liquid-mounted liquid filled type seal.

(8) A storage tank with storage capacity less than or equal to 1,000 gallons is exempt from the requirements of this division.

(c) The following exemptions apply in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties.

(1) A storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.

(2) Slotted guidepoles installed in a floating roof storage tank are exempt from the provisions of §115.112(c) of this title.

(3) A storage tank with storage capacity between 1,000 gallons and 25,000 gallons is exempt from the requirements of §115.112(c)(1) of this title if construction began before May 12, 1973.

(4) A storage tank with storage capacity less than or equal to 420,000 gallons is exempt from the requirements of §115.112(c)(3) of this title.

(5) A storage tank with storage capacity less than or equal to 1,000 gallons is exempt from the requirements of this division.

Adopted June 3, 2015 Effective June 25, 2015

§115.112. Control Requirements.

(a) The following requirements apply in the Beaumont-Port Arthur, Dallas-Fort Worth, and El Paso areas, as defined in §115.10 of this title (relating to Definitions). The control requirements in this subsection no longer apply in the Dallas-Fort Worth area beginning March 1, 2013.

(1) No person shall place, store, or hold in any storage tank any volatile organic compounds (VOC) unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table I(a) of this paragraph for VOC other than crude oil and condensate or Table II(a) of this paragraph for crude oil and condensate.

Figure: 30 TAC §115.112(a)(1)

Table I(a): Required Control for a Storage Tank Storing Volatile Organic Compounds (VOC) Other than Crude Oil and Condensate

True Vapor Pressure (pounds per square inch absolute (psia))	Storage Capacity (gallon (gal))	Control Requirements
≥ 1.5 psia and < 11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe or Vapor control system

≥ 1.5 psia and < 11 psia	> 25,000 gal and ≤ 40,000 gal	Internal floating roof, or External floating roof (any type), or Vapor control system
≥ 1.5 psia and < 11 psia	> 40,000 gal	Internal floating roof, or External floating roof with primary seal (any type) and secondary seal, or Vapor control system
≥ 11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe or Vapor control system
≥ 11 psia	> 25,000 gal	Submerged fill pipe and Vapor control system

Table II(a): Required Control for a Storage Tank Storing Crude Oil and Condensate

True Vapor Pressure (pounds per square inch absolute (psia))	Storage Capacity (gallon (gal))	Control Requirements
≥ 1.5 psia and < 11 psia	> 1,000 gal and ≤ 40,000 gal	Submerged fill pipe or Vapor control system
≥ 1.5 psia and < 11 psia	> 40,000 gal	Internal floating roof, or External floating roof with primary seal (any type) and secondary seal, or Vapor control system
≥ 11 psia	> 1,000 gal and ≤ 40,000 gal	Submerged fill pipe or

		Vapor control system
≥ 11 psia	> 40,000 gal	Submerged fill pipe and Vapor control system

(2) For an external floating roof or internal floating roof storage tank subject to the provisions of paragraph (1) of this subsection, the following requirements apply.

(A) All openings in an internal floating roof or external floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents must provide a projection below the liquid surface or be equipped with a cover, seal, or lid. Any cover, seal, or lid must be in a closed (i.e., no visible gap) position at all times except when the device is in actual use.

(B) Automatic bleeder vents (vacuum breaker vents) must be closed at all times except when the roof is being floated off or landed on the roof leg supports.

(C) Rim vents, if provided, must be set to open only when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

(D) Any roof drain that empties into the stored liquid must be equipped with a slotted membrane fabric cover that covers at least 90% of the area of the opening.

(E) There must be no visible holes, tears, or other openings in any seal or seal fabric.

(F) For an external floating roof storage tank, secondary seals must be the rim-mounted type (the seal must be continuous from the floating roof to the tank wall). The accumulated area of gaps that exceed 1/8 inch in width between the secondary seal and storage tank wall may not be greater than 1.0 square inch per foot of tank diameter.

(3) Vapor control systems, as defined in §115.10 of this title, used as a control device on any storage tank must maintain a minimum control efficiency of 90%. If a flare is used, it must be designed and operated in accordance with 40 Code of Federal Regulations §60.18(b-f) (as amended through December 22, 2008 (73 FR 78209)) and be lit at all times when VOC vapors are routed to the flare.

(b) The following requirements apply in Gregg, Nueces, and Victoria Counties.

(1) No person shall place, store, or hold in any storage tank any VOC, unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table I(a) in subsection (a)(1) of this section for VOC other than crude oil and condensate or Table II(a) in subsection (a)(1) of this section for crude oil and condensate. If a flare is used as a vapor recovery system, as defined in §115.10 of this title, it must be designed and operated in accordance with 40 Code of Federal Regulations §60.18(b) - (f) (as amended through December 22, 2008 (73 FR 78209)) and be lit at all times when VOC vapors are routed to the flare.

(2) For an external floating roof or internal floating roof storage tank subject to the provisions of paragraph (1) of this subsection, the following requirements apply.

(A) All openings in an internal floating roof or external floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, must provide a projection below the liquid surface or be equipped with a cover, seal, or lid. Any cover, seal, or lid must be in a closed (i.e., no visible gap) position at all times, except when the device is in actual use.

(B) Automatic bleeder vents (vacuum breaker vents) must be closed at all times except when the roof is being floated off or landed on the roof leg supports.

(C) Rim vents, if provided, must be set to open only when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

(D) Any roof drain that empties into the stored liquid must be equipped with a slotted membrane fabric cover that covers at least 90% of the area of the opening.

(E) There must be no visible holes, tears, or other openings in any seal or seal fabric.

(F) For an external floating roof storage tank, secondary seals must be the rim-mounted type (the seal shall be continuous from the floating roof to the tank wall). The accumulated area of gaps that exceed 1/8 inch in width between the secondary seal and tank wall may not be greater than 1.0 square inch per foot of tank diameter.

(c) The following requirements apply in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties.

(1) No person may place, store, or hold in any storage tank any VOC, other than crude oil or condensate, unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table I(b) of this paragraph for VOC other than crude oil and condensate.

Figure: 30 TAC §115.112(c)(1)

Table I(b). Required Control for a Storage Tank Storing Volatile Organic Compounds (VOC) Other than Crude Oil and Condensate

True Vapor Pressure (pounds per square inch absolute (psia))	Storage Capacity (gallon (gal))	Control Requirements
≥ 1.5 psia and < 11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe or Vapor control system
≥ 1.5 psia and < 11 psia	> 25,000 gal	Internal floating roof or external floating roof (any type) or Vapor control system
≥ 11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe or Vapor control system
≥ 11 psia	> 25,000 gal	Submerged fill pipe and Vapor control system

(2) For an external floating roof or internal floating roof storage tank subject to the provisions of paragraph (1) of this subsection, the following requirements apply.

(A) There must be no visible holes, tears, or other openings in any seal or seal fabric.

(B) All tank gauging and sampling devices must be vapor-tight except when gauging and sampling is taking place.

(3) No person in Matagorda or San Patricio Counties shall place, store, or hold crude oil or condensate in any storage tank unless the storage tank is a pressure tank capable of maintaining working pressures sufficient at all times to prevent vapor or gas loss to the atmosphere or is equipped with one of the following control devices, properly maintained and operated:

(A) an internal floating roof or external floating roof, as defined in §115.10 of this title. These control devices will not be allowed if the VOC has a true vapor pressure of 11.0 pounds per square inch absolute (psia) or greater. All tank-gauging and tank-sampling devices must be vapor-tight, except when gauging or sampling is taking place; or

(B) a vapor control system as defined in §115.10 of this title.

(d) The following requirements apply in the Houston-Galveston-Brazoria area, as defined in §115.10 of this title. The requirements in this subsection no longer apply beginning March 1, 2013.

(1) No person shall place, store, or hold in any storage tank any VOC unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in either Table I(a) of subsection (a)(1) of this section for VOC other than crude oil and condensate or Table II(a) of subsection (a)(1) of this section for crude oil and condensate.

(2) For an external floating roof or internal floating roof storage tank subject to the provisions of paragraph (1) of this subsection, the following requirements apply.

(A) All openings in an internal floating roof or external floating roof as defined in §115.10 of this title except for automatic bleeder vents (vacuum breaker vents), and rim space vents must provide a projection below the liquid surface. All openings in an internal floating roof or external floating roof except for automatic bleeder vents (vacuum breaker vents), rim space vents, leg sleeves, and roof drains must be equipped with a deck cover. The deck cover must be equipped with a gasket in good operating condition between the cover and the deck. The deck cover must be closed (i.e., no gap of more than 1/8 inch) at all times, except when the cover must be open for access.

(B) Automatic bleeder vents (vacuum breaker vents) and rim space vents must be equipped with a gasketed lid, pallet, flapper, or other closure device and

must be closed (i.e., no gap of more than 1/8 inch) at all times except when required to be open to relieve excess pressure or vacuum in accordance with the manufacturer's design.

(C) Each opening into the internal floating roof for a fixed roof support column may be equipped with a flexible fabric sleeve seal instead of a deck cover.

(D) Any external floating roof drain that empties into the stored liquid must be equipped with a slotted membrane fabric cover that covers at least 90% of the area of the opening or an equivalent control that must be kept in a closed (i.e., no gap of more than 1/8 inch) position at all times except when the drain is in actual use. Stub drains on an internal floating roof storage tank are not subject to this requirement.

(E) There must be no visible holes, tears, or other openings in any seal or seal fabric.

(F) For an external floating roof storage tank, secondary seals must be the rim-mounted type (the seal must be continuous from the floating roof to the tank wall with the exception of gaps that do not exceed the following specification). The accumulated area of gaps that exceed 1/8 inch in width between the secondary seal and storage tank wall may not be greater than 1.0 square inch per foot of storage tank diameter.

(G) Each opening for a slotted guidepole in an external floating roof storage tank must be equipped with one of the following control device configurations:

(i) a pole wiper and pole float that has a seal or wiper at or above the height of the pole wiper;

(ii) a pole wiper and a pole sleeve;

(iii) an internal sleeve emission control system;

(iv) a retrofit to a solid guidepole system;

(v) a flexible enclosure system; or

(vi) a cover on an external floating roof tank.

(H) The external floating roof or internal floating roof must be floating on the liquid surface at all times except as specified in this subparagraph. The external floating roof or internal floating roof may be supported by the leg supports or

other support devices, such as hangers from the fixed roof, during the initial fill or refill after the storage tank has been cleaned or as allowed under the following circumstances:

(i) when necessary for maintenance or inspection;

(ii) when necessary for supporting a change in service to an incompatible liquid;

(iii) when the storage tank has a storage capacity less than 25,000 gallons or the vapor pressure of the material stored is less than 1.5 psia;

(iv) when the vapors are routed to a control device from the time the floating roof is landed until the floating roof is within ten percent by volume of being refloated;

(v) when all VOC emissions from the tank, including emissions from roof landings, have been included in a floating roof storage tank emissions limit or cap approved under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification); or

(vi) when all VOC emissions from floating roof landings at the regulated entity, as defined in §101.1 of this title (relating to Definitions), are less than 25 tons per year.

(3) Vapor control systems, as defined in §115.10 of this title, used as a control device on any storage tank must maintain a minimum control efficiency of 90%.

(4) For a storage tank storing condensate, as defined in §101.1 of this title, prior to custody transfer, flashed gases must be routed to a vapor control system if the liquid throughput through an individual tank or the aggregate of tanks in a tank battery exceeds 1,500 barrels (63,000 gallons) per year.

(5) For a storage tank storing crude oil or condensate prior to custody transfer or at a pipeline breakout station, flashed gases must be routed to a vapor control system if the uncontrolled VOC emissions from an individual storage tank, or from the aggregate of storage tanks in a tank battery, equal or exceed 25 tons per year on a rolling 12-month basis. Uncontrolled emissions must be estimated by one of the following methods; however, if emissions determined using direct measurements or other methods approved by the executive director under subparagraphs (A) or (D) of this paragraph are higher than emissions estimated using the default factors or charts in subparagraphs (B) or (C) of this paragraph, the higher values must be used.

(A) The owner or operator may make direct measurements using the measuring instruments and methods specified in §115.117 of this title (relating to Approved Test Methods).

(B) The owner or operator may use a factor of 33.3 pounds of VOC per barrel (42 gallons) of condensate produced or 1.6 pounds of VOC per barrel (42 gallons) of oil produced.

(C) For crude oil storage only, the owner or operator may use the chart in Exhibit 2 of the United States Environmental Protection Agency publication *Lessons Learned from Natural Gas Star Partners: Installing Vapor Recovery Units on Crude Oil Storage Tanks*, October 2003, and assuming that the hydrocarbon vapors have a molecular weight of 34 pounds per pound mole and are 48% by weight VOC.

(D) Other test methods or computer simulations may be allowed if approved by the executive director.

(e) The control requirements in this subsection apply in the Houston-Galveston-Brazoria and Dallas-Fort Worth areas beginning March 1, 2013, except as specified in §115.119 of this title (relating to Compliance Schedules).

(1) No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of this paragraph for crude oil and condensate.

Figure: 30 TAC §115.112(e)(1)

Table 1: Required Control for a Storage Tank Storing Volatile Organic Compounds Other Than Crude Oil and Condensate

True Vapor Pressure (pounds per square inch absolute (psia))	Storage Capacity (gallon (gal))	Control Requirements
≥ 1.5 psia and < 11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe or Vapor control system
≥ 1.5 psia and < 11 psia	> 25,000 gal and ≤	Internal floating roof,

	40,000 gal	or External floating roof (any type), or Vapor control system
≥ 1.5 psia and < 11 psia	> 40,000 gal	Internal floating roof, or External floating roof with primary seal (any type) and secondary seal, or Vapor control system
≥ 11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe or Vapor control system
≥ 11 psia	> 25,000 gal	Submerged fill pipe and Vapor control system

Table 2: Required Control for a Storage Tank Storing Crude Oil and Condensate

True Vapor Pressure (pounds per square inch absolute (psia))	Storage Capacity (gallon (gal))	Control Requirements
≥ 1.5 psia and < 11 psia	> 1,000 gal and ≤ 40,000 gal	Submerged fill pipe, or Vapor control system
≥ 1.5 psia and < 11 psia	> 40,000 gal	Internal floating roof, or External floating roof with primary seal (any type) and secondary seal, or Vapor control system
≥ 11 psia	> 1,000 gal and ≤ 40,000 gal	Submerged fill pipe, or

		Vapor control system
≥ 11 psia	> 40,000 gal	Submerged fill pipe, and Vapor control system

(2) For an external floating roof or internal floating roof storage tank subject to the provisions of paragraph (1) of this subsection, the following requirements apply.

(A) All openings in an internal floating roof or external floating roof must provide a projection below the liquid surface. Automatic bleeder vents (vacuum breaker vents) and rim space vents are not subject to this requirement.

(B) All openings in an internal floating roof or external floating roof must be equipped with a deck cover. The deck cover must be equipped with a gasket in good operating condition between the cover and the deck. The deck cover must be closed (i.e., no gap of more than 1/8 inch) at all times, except when the cover must be open for access. Automatic bleeder vents (vacuum breaker vents), rim space vents, leg sleeves, and roof drains are not subject to this requirement.

(C) Automatic bleeder vents (vacuum breaker vents) and rim space vents must be equipped with a gasketed lid, pallet, flapper, or other closure device and must be closed (i.e., no gap of more than 1/8 inch) at all times except when required to be open to relieve excess pressure or vacuum in accordance with the manufacturer's design.

(D) Each opening into the internal floating roof for a fixed roof support column may be equipped with a flexible fabric sleeve seal instead of a deck cover.

(E) Any external floating roof drain that empties into the stored liquid must be equipped with a slotted membrane fabric cover that covers at least 90% of the area of the opening or an equivalent control that must be kept in a closed (i.e., no gap of more than 1/8 inch) position at all times except when the drain is in actual use. Stub drains on an internal floating roof storage tank are not subject to this requirement.

(F) There must be no visible holes, tears, or other openings in any seal or seal fabric.

(G) For an external floating roof storage tank, secondary seals must be the rim-mounted type. The seal must be continuous from the floating roof to the tank wall with the exception of gaps that do not exceed the following specification. The

accumulated area of gaps that exceed 1/8 inch in width between the secondary seal and storage tank wall may not be greater than 1.0 square inch per foot of storage tank diameter.

(H) Each opening for a slotted guidepole in an external floating roof storage tank must be equipped with one of the following control device configurations:

(i) a pole wiper and pole float that has a seal or wiper at or above the height of the pole wiper;

(ii) a pole wiper and a pole sleeve;

(iii) an internal sleeve emission control system;

(iv) a retrofit to a solid guidepole system;

(v) a flexible enclosure system; or

(vi) a cover on an external floating roof tank.

(I) The external floating roof or internal floating roof must be floating on the liquid surface at all times except as allowed under the following circumstances:

(i) during the initial fill or refill after the storage tank has been cleaned;

(ii) when necessary for preventive maintenance, roof repair, primary seal inspection, or removal and installation of a secondary seal, if product is not transferred into or out of the storage tank, emissions are minimized, and the repair is completed within seven calendar days;

(iii) when necessary for supporting a change in service to an incompatible liquid;

(iv) when the storage tank has a storage capacity less than 25,000 gallons;

(v) when the vapors are routed to a control device from the time the storage tank has been emptied to the extent practical or the drain pump loses suction until the floating roof is within 10% by volume of being refloated;

(vi) when all VOC emissions from the storage tank, including emissions from floating roof landings, have been included in an emissions limit or cap approved under Chapter 116 of this title prior to March 1, 2013; or

(vii) when all VOC emissions from floating roof landings at the regulated entity are less than 25 tons per year.

(3) A control device used to comply with this subsection must meet one of the following conditions at all times when VOC vapors are routed to the device.

(A) A control device, other than a vapor recovery unit or a flare, must maintain the following minimum control efficiency:

(i) in the Houston-Galveston-Brazoria area, 90%; and

(ii) in the Dallas-Fort Worth area, 95%.

(B) A vapor recovery unit must be designed to process all vapor generated by the maximum liquid throughput of the storage tank or the aggregate of storage tanks in a tank battery and must transfer recovered vapors to a pipe or container that is vapor-tight, as defined in §115.10 of this title.

(C) A flare must be designed and operated in accordance with 40 Code of Federal Regulations §60.18(b) - (f) (as amended through December 22, 2008 (73 FR 78209)) and be lit at all times when VOC vapors are routed to the flare.

(4) For a storage tank storing condensate prior to custody transfer, flashed gases must be routed to a vapor control system if the condensate throughput of an individual tank or the aggregate of tanks in a tank battery exceeds:

(A) in the Houston-Galveston-Brazoria area, 1,500 barrels (63,000 gallons) per year on a rolling 12-month basis;

(B) in the Dallas-Fort Worth area except Wise County:

(i) 3,000 barrels (126,000 gallons) per year on a rolling 12-month basis; or

(ii) 15 months after the date the commission publishes notice in the Texas Register as specified in §115.119(b)(1)(C) of this title that the Dallas-Fort Worth area has been reclassified as a severe nonattainment area for the 1997 Eight-Hour Ozone National Ambient Air Quality Standard, 1,500 barrels (63,000 gallons) per year on a rolling 12-month basis; and

(C) in Wise County, 6,000 barrels (252,000 gallons) per year on a rolling 12-month basis.

(5) For a storage tank storing crude oil or condensate prior to custody transfer or at a pipeline breakout station, flashed gases must be routed to a vapor control system if the uncontrolled VOC emissions from an individual storage tank, or from the aggregate of storage tanks in a tank battery, or from the aggregate of storage tanks at a pipeline breakout station in the Dallas-Fort Worth area, equal or exceed:

(A) in the Houston-Galveston-Brazoria area, 25 tons per year on a rolling 12-month basis;

(B) in the Dallas-Fort Worth area, except Wise County:

(i) 50 tons per year on a rolling 12-month basis; or

(ii) 15 months after the date the commission publishes notice in the *Texas Register* as specified in §115.119(b)(1)(C) of this title that the Dallas-Fort Worth area has been reclassified as a severe nonattainment area for the 1997 Eight-Hour Ozone National Ambient Air Quality Standard, 25 tons per year on a rolling 12-month basis; and

(C) in Wise County, 100 tons per year on a rolling 12-month basis.

(6) Uncontrolled emissions from a storage tank or tank battery storing crude oil or condensate prior to custody transfer or at a pipeline breakout station must be estimated by one of the following methods. However, if emissions determined using direct measurements or other methods approved by the executive director under subparagraphs (A) or (B) of this paragraph are higher than emissions estimated using the default factors or charts in subparagraphs (C) or (D) of this paragraph, the higher values must be used.

(A) The owner or operator may make direct measurements using the measuring instruments and methods specified in §115.117 of this title.

(B) The owner or operator may use other test methods or computer simulations approved by the executive director.

(C) The owner or operator may use a factor of 33.3 pounds of VOC per barrel (42 gallons) of condensate produced or 1.6 pounds of VOC per barrel (42 gallons) of oil produced.

(D) For crude oil storage only, the owner or operator may use the chart in Exhibit 2 of the United States Environmental Protection Agency publication

Lessons Learned from Natural Gas Star Partners: Installing Vapor Recovery Units on Crude Oil Storage Tanks, October 2003, and assuming that the hydrocarbon vapors have a molecular weight of 34 pounds per pound mole and are 48% by weight VOC.

(7) Storage tanks in the Dallas-Fort Worth area storing crude oil or condensate prior to custody transfer or at a pipeline breakout station for which the owner or operator is required by this subsection to control flashed gases must be maintained in accordance with manufacturer instructions. All openings in the storage tank through which vapors are not routed to a vapor recovery unit or other vapor control device must be equipped with a closure device maintained according to the manufacturer's instructions, and operated according to this paragraph. If manufacturer instructions are unavailable, industry standards consistent with good engineering practice can be substituted.

(A) Each closure device must be closed at all times except when normally actuated or required to be open for temporary access or to relieve excess pressure or vacuum in accordance with the manufacturer's design and consistent with good air pollution control practices. Such opening, actuation, or use must be limited to minimize vapor loss.

(B) Each closure device must be properly sealed to minimize vapor loss when closed.

(C) Each closure device must either be latched closed or, if designed to relieve pressure, set to automatically open at a pressure that will ensure all vapors are routed to the vapor recovery unit or other vapor control device under normal operating conditions other than gauging the tank or taking a sample through an open thief hatch.

(D) No closure device may be allowed to have a VOC leak for more than 15 calendar days after the leak is found unless delay of repair is allowed. For the purposes of this subparagraph, a leak is the exuding of process gasses from a closed device based on sight, smell, or sound. If parts are unavailable, repair may be delayed. Parts must be ordered promptly and the repair must be completed within five days of receipt of required parts. Repair may be delayed until the next shutdown if the repair of the component would require a shutdown that would create more emissions than the repair would eliminate. Repair must be completed by the end of the next shutdown.

Adopted June 3, 2015 Effective June 25, 2015

§115.113. Alternate Control Requirements.

Alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division 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.

Adopted December 7, 2011 Effective December 29, 2011

§115.114. Inspection and Repair Requirements.

(a) The following inspection requirements apply 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).

(1) For an internal floating roof storage tank, the internal floating roof and the primary seal or the secondary seal (if one is in service) must be visually inspected through a fixed roof inspection hatch at least once every 12 months.

(A) If the internal floating roof is not resting on the surface of the volatile organic compounds (VOC) inside the storage tank and is not resting on the leg supports; or liquid has accumulated on the internal floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage tank, within 60 days of the inspection the owner or operator shall repair the items or shall empty and degas the storage tank in accordance with Subchapter F, Division 3 of this chapter (relating to Degassing of Storage Tanks, Transport Vessels, and Marine Vessels).

(B) If a failure cannot be repaired within 60 days and if the storage tank cannot be emptied within 60 days, the owner or operator may submit written requests for up to two extensions of up to 30 additional days each to the appropriate regional office. The owner or operator shall submit a copy to any local air pollution control program with jurisdiction. Each request for an extension must include a statement that alternate storage capacity is unavailable and a schedule that will assure that the repairs will be completed as soon as possible.

(2) For an external floating roof storage tank, the secondary seal gap must be physically measured at least once every 12 months to insure compliance with §115.112(a)(2)(F), (d)(2)(F), and (e)(2)(G) of this title (relating to Control Requirements).

(A) If the secondary seal gap exceeds the limitations specified by §115.112(a)(2)(F), (d)(2)(F), and (e)(2)(G) of this title, within 60 days of the inspection the owner or operator shall repair the items or shall empty and degas the storage tank in accordance with Subchapter F, Division 3 of this chapter.

(B) If a failure cannot be repaired within 60 days and if the storage tank cannot be emptied within 60 days, the owner or operator may submit written

requests for up to two extensions of up to 30 additional days each to the appropriate regional office. The owner or operator shall submit a copy to any local air pollution control program with jurisdiction. Each request for an extension must include a statement that alternate storage capacity is unavailable and a schedule that will assure that the repairs will be completed as soon as possible.

(3) If the storage tank is equipped with a mechanical shoe or liquid-mounted primary seal, compliance with §115.112(a)(2)(F), (d)(2)(F), and (e)(2)(G) of this title can be determined by visual inspection.

(4) For an external floating roof storage tank, the secondary seal must be visually inspected at least once every six months to ensure compliance with §115.112(a)(2)(E) and (F), (d)(2)(E) and (F), and (e)(2)(F) and (G) of this title.

(A) If the external floating roof is not resting on the surface of the VOC inside the storage tank and is not resting on the leg supports; or liquid has accumulated on the external floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage tank, within 60 days of the inspection the owner or operator shall repair the items or shall empty and degas the storage tank in accordance with Subchapter F, Division 3 of this chapter.

(B) If a failure cannot be repaired within 60 days and if the storage tank cannot be emptied within 60 days, the owner or operator may submit written requests for up to two extensions of up to 30 additional days each to the appropriate regional office. The owner or operator shall submit a copy to any local air pollution control program with jurisdiction. Each request for an extension must include a statement that alternate storage capacity is unavailable and a schedule that will assure that the repairs will be completed as soon as possible.

(5) For fixed roof storage tanks in the Dallas-Fort Worth area storing crude oil or condensate prior to custody transfer or at a pipeline breakout station for which the owner or operator is required by §115.112(e) of this title to control flashed gases, the owner or operator shall inspect and repair all closure devices not connected to a vapor recovery unit or other vapor control device according to the schedule in this paragraph.

(A) The owner or operator shall conduct an audio, visual, and olfactory inspection of each closure device not connected to a vapor recovery unit or other vapor control device to ensure compliance with §115.112(e)(7)(A) of this title. The inspection must occur when liquids are not being added to or unloaded from the tank. If the owner or operator finds the closure device open for reasons not allowed in §115.112(e)(7)(A) of this title, the owner or operator shall attempt to close the device during the inspection. The inspection must occur before the end of one business day

after each opening of a thief or access hatch for sampling or gauging, and before the end of one business day after each unloading event. If multiple events occur on a single day, a single inspection within one business day after the last event is sufficient.

(B) The owner or operator shall conduct an audio, visual, and olfactory inspection of all gaskets and vapor sealing surfaces of each closure device not connected to a vapor recovery unit or other vapor control device once per calendar quarter to ensure compliance with §115.112(e)(7)(B) of this title. If the owner or operator finds an improperly sealed closure device, the owner or operator shall make a first attempt at repair no later than five calendar days after the inspection and repair the device no later than 15 calendar days after the inspection unless delay of repair is allowed. If parts are unavailable, repair may be delayed. Parts must be ordered promptly and the repair must be completed within five days of receipt of required parts. Repair may be delayed until the next shutdown if the repair of the component would require a shutdown that would create more emissions than the repair would eliminate. Repair must be completed by the end of the next shutdown. For the purpose of this subparagraph, a repair is complete if the closure device no longer exudes process gasses based on sight, smell, or sound.

(b) The following inspection requirements apply in Gregg, Nueces, and Victoria Counties.

(1) For an internal floating roof storage tank, the following inspection requirements apply.

(A) If during an inspection of an internal floating roof storage tank, the internal floating roof is not resting on the surface of the VOC inside the storage tank and is not resting on the leg supports; or liquid has accumulated on the internal floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage tank, within 60 days of the inspection the owner or operator shall repair the items or shall empty and degas the storage tank.

(B) If a failure cannot be repaired within 60 days and if the storage tank cannot be emptied within 60 days, the owner or operator may submit written requests for up to two extensions of up to 30 additional days each to the appropriate regional office. The owner or operator shall submit a copy to any local air pollution control program with jurisdiction. Each request for an extension must include a statement that alternate storage capacity is unavailable and a schedule that will assure that the repairs will be completed as soon as possible.

(2) For an external floating roof storage tank, the secondary seal gap must be physically measured at least once every 12 months to insure compliance with §115.112(b)(2)(F) of this title.

(A) If the secondary seal gap exceeds the limitations specified by §115.112(b)(2)(F) of this title, within 60 days of the inspection the owner or operator shall repair the items or shall empty and degas the storage tank.

(B) If a failure cannot be repaired within 60 days and if the storage tank cannot be emptied within 60 days, the owner or operator may submit written requests for up to two extensions of up to 30 additional days each to the appropriate regional office. The owner or operator shall submit a copy to any local air pollution control program with jurisdiction. Each request for an extension must include a statement that alternate storage capacity is unavailable and a schedule that will assure that the repairs will be completed as soon as possible.

(3) If the storage tank is equipped with a mechanical shoe or liquid-mounted primary seal, compliance with §115.112(b)(2)(F) of this title can be determined by visual inspection.

(4) For an external floating roof storage tank, the secondary seal must be visually inspected at least once every 12 months to insure compliance with §115.112(b)(2)(E) - (F) of this title.

(A) If the external floating roof is not resting on the surface of the VOC inside the storage tank and is not resting on the leg supports; or liquid has accumulated on the external floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage tank, within 60 days of the inspection the owner or operator shall repair the items or shall empty and degas the storage tank.

(B) If a failure cannot be repaired within 60 days and if the storage tank cannot be emptied within 60 days, the owner or operator may submit written requests for up to two extensions of up to 30 additional days each to the appropriate regional office. The owner or operator shall submit a copy to any local air pollution control program with jurisdiction. Each request for an extension must include a statement that alternate storage capacity is unavailable and a schedule that will assure that the repairs will be completed as soon as possible.

(c) The following inspection requirements apply in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties.

(1) For an internal floating roof storage tank, the following inspection requirements apply.

(A) If during an inspection of an internal floating roof storage tank, the internal floating roof is not resting on the surface of the VOC inside the storage tank

and is not resting on the leg supports; or liquid has accumulated on the internal floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage tank, within 60 days of the inspection the owner or operator shall repair the items or shall empty and degas the storage tank.

(B) If a failure cannot be repaired within 60 days and if the storage tank cannot be emptied within 60 days, the owner or operator may submit written requests for up to two extensions of up to 30 additional days each to the appropriate regional office. The owner or operator shall submit a copy to any local air pollution control program with jurisdiction. Each request for an extension must include a statement that alternate storage capacity is unavailable and a schedule that will assure that the repairs will be completed as soon as possible.

(2) For an external floating roof storage tank, the following inspection requirements apply.

(A) If during an inspection of an external floating roof storage tank, the external floating roof is not resting on the surface of the VOC inside the storage tank and is not resting on the leg supports; or liquid has accumulated on the external floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage tank, within 60 days of the inspection the owner or operator shall repair the items or shall empty and degas the storage tank.

(B) If a failure cannot be repaired within 60 days and if the storage tank cannot be emptied within 60 days, the owner or operator may submit written requests for up to two extensions of up to 30 additional days each to the appropriate regional office. The owner or operator shall submit a copy to any local air pollution control program with jurisdiction. Each request for an extension must include a statement that alternate storage capacity is unavailable and a schedule that will assure that the repairs will be completed as soon as possible.

Adopted June 3, 2015 Effective June 25, 2015

§115.115. Monitoring Requirements.

(a) The following monitoring requirements apply 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). An affected owner or operator shall install and maintain monitors to measure operational parameters of any of the following control devices installed to meet applicable control requirements. Such monitors must be sufficient to demonstrate proper functioning of those devices to design specifications.

(1) For a direct-flame incinerator, the owner or operator shall continuously monitor the exhaust gas temperature immediately downstream of the device.

(2) For a condensation system, the owner or operator shall continuously monitor the outlet gas temperature to ensure the temperature is below the manufacturer's recommended operating temperature for controlling the volatile organic compounds (VOC) vapors routed to the device.

(3) For a carbon adsorption system or carbon adsorber, as defined in §101.1 of this title (relating to Definitions), the owner or operator shall:

(A) continuously monitor the exhaust gas VOC concentration of a carbon adsorption system that regenerates the carbon bed directly to determine breakthrough. For the purpose of this paragraph, breakthrough is defined as a measured VOC concentration exceeding 100 parts per million by volume above background expressed as methane; or

(B) switch the vent gas flow to fresh carbon at a regular predetermined time interval for a carbon adsorber or carbon adsorption system that does not regenerate the carbon directly. The time interval must be less than the carbon replacement interval determined by the maximum design flow rate and the VOC concentration in the gas stream vented to the carbon adsorption system or carbon adsorber.

(4) For a catalytic incinerator, the owner or operator shall continuously monitor the inlet and outlet gas temperature.

(5) For a vapor recovery unit used to comply with §115.112(e)(3) of this title (relating to Control Requirements), the owner or operator shall continuously monitor at least one of the following operational parameters:

(A) run-time of the compressor or motor in a vapor recovery unit;

(B) total volume of recovered vapors; or

(C) other parameters sufficient to demonstrate proper functioning to design specifications.

(6) For a control device not listed in this subsection, the owner or operator shall continuously monitor one or more operational parameters sufficient to demonstrate proper functioning of the control device to design specifications.

(b) In Victoria County, the owner or operator shall monitor operational parameters of any of the emission control devices listed in this subsection installed to meet applicable control requirements.

(1) For a direct-flame incinerator, the owner or operator shall continuously monitor the exhaust gas temperature immediately downstream of the device.

(2) For a condensation system or catalytic incinerator, the owner or operator shall continuously monitor the inlet and outlet gas temperature.

(3) For a carbon adsorption system or carbon adsorber, the owner or operator shall continuously monitor the exhaust gas VOC concentration to determine if breakthrough has occurred. The owner or operator may conduct this monitoring using Method 21, as specified in §115.117 of this title, if the monitoring is conducted once every seven calendar days.

Adopted June 3, 2015 Effective June 25, 2015

§115.116. Testing Requirements.

(a) The testing requirements in this subsection apply in the Dallas-Fort Worth, Houston-Galveston-Brazoria, Beaumont-Port Arthur, and El Paso areas, as defined in §115.10 of this title (relating to Definitions).

(1) For a vapor control system, other than a vapor recovery unit or a flare, used to comply with the control requirements in §115.112(a)(3) and (e)(3)(A) of this title (relating to Control Requirements), an initial control efficiency test must be conducted in accordance with the approved test methods in §115.117 of this title (relating to Approved Test Methods). If the vapor control system is modified in any way that could reasonably be expected to decrease the control efficiency, the device must be retested within 60 days of the modification.

(2) A flare used to comply with the control requirements in §115.112(a)(3) and (e)(3)(C) of this title must meet the design verification test requirements in 40 Code of Federal Regulations §60.18(f) (as amended through December 22, 2008 (73 FR 78209)).

(b) The testing requirements in this subsection apply in Gregg, Nueces, and Victoria Counties.

(1) For a vapor control system, other than a vapor recovery unit or a flare, compliance with the control requirements in §115.112(b) of this title must be demonstrated in accordance with the approved test methods in §115.117 of this title.

(2) A flare must meet the design verification test requirements in 40 Code of Federal Regulations §60.18(f) (as amended through December 22, 2008 (73 FR 78209)).

Adopted December 7, 2011 Effective December 29, 2011

§115.117. 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) and Gregg, Nueces, and Victoria Counties, compliance with the requirements in this division must be determined by applying the following test methods, as appropriate:

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

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

(3) Method 21 (40 CFR Part 60, Appendix A-7) for determining volatile organic compounds concentrations for the purposes of determining the presence of leaks and determining breakthrough on a carbon adsorption system or carbon adsorber. If the owner or operator chooses to conduct a test to verify a vapor-tight requirement, Method 21 is acceptable;

(4) Method 22 (40 CFR Part 60, Appendix A) for determination of visible emissions from flares;

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

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

(7) test method described in 40 CFR §60.113a(a)(1)(ii) (effective April 8, 1987) for measurement of storage tank seal gap;

(8) true vapor pressure must be determined using standard reference texts or ASTM International Test Method D323, D2879, D4953, D5190, D5191, or D6377 for the measurement of Reid vapor pressure, adjusted for actual storage temperature in accordance with American Petroleum Institute Publication 2517. For the purposes of temperature correction, the owner or operator shall use the actual storage temperature. Actual storage temperature of an unheated storage tank may be determined using the

maximum local monthly average ambient temperature as reported by the National Weather Service. Actual storage temperature of a heated storage tank must be determined using either the measured temperature or the temperature set point of the storage tank;

(9) mass flow meter, positive displacement meter, or similar device for measuring the volumetric flow rate of flash, working, breathing, and standing emissions from crude oil and condensate over a 24-hour period representative of normal operation. For crude oil and natural gas production sites, volumetric flow rate measurements must be made while the producing wells are operational;

(10) test methods referenced in paragraphs (2), (5), and (6) of this section or Gas Processors Association Method 2286, Tentative Method of Extended Analysis for Natural Gas and Similar Mixtures by Temperature Programmed Gas Chromatography, to measure the concentration of volatile organic compounds in flashed gases from crude oil and condensate storage;

(11) test methods other than those specified in this section may be used if validated by 40 CFR Part 63, Appendix A, Test Method 301 and approved by the executive director; or

(12) minor modifications to these test methods approved by the executive director.

Adopted June 3, 2015 Effective June 25, 2015

§115.118. Recordkeeping Requirements.

(a) The following recordkeeping requirements apply 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).

(1) The owner or operator of storage tank claiming an exemption in §115.111 of this title (relating to Exemptions) shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria. Where applicable, true vapor pressure, volatile organic compounds (VOC) content type, or a combination of the two must be recorded initially and at every change of service or when the storage tank is emptied and refilled.

(2) The owner or operator of an external floating roof storage tank that is exempt from the requirement for a secondary seal in accordance with §115.111(a)(1), (6), and (7) of this title and is used to store VOC with a true vapor pressure greater than 1.0 pounds per square inch absolute (psia) shall maintain records of the type of VOC stored and the average monthly true vapor pressure of the stored liquid.

(3) The owner or operator shall maintain records of the results of inspections required by §115.114(a) of this title (relating to Inspection and Repair Requirements). For secondary seal gaps that are required to be physically measured during inspection, these records must include a calculation of emissions for all secondary seal gaps that exceed 1/8 inch where the accumulated area of such gaps is greater than 1.0 square inch per foot of tank diameter. These calculated emissions inventory reportable emissions must be reported in the annual emissions inventory submittal required by §101.10 of this title (relating to Emissions Inventory Requirements). The emissions must be calculated using the following equation.

Figure: 30 TAC §115.118(a)(3)

$$EI_{Reportable} = (E_{1Seal} - E_{2Seals}) \times \left(\frac{G_m - G_a}{G_a}\right) \times \left(\frac{G_{8thL}}{\pi D}\right) \times 90$$

Where:

$EI_{Reportable}$ = The calculated emissions inventory reportable emissions that must be reported in the annual emissions inventory submittal required by §101.10 of this title (relating to Emissions Inventory Requirements).

E_{1Seal} = The AP-42 estimate of emissions from a floating roof tank with a primary seal only. The material is assumed to be stored at a temperature equal to the maximum of the local monthly average temperatures during the emission inventory reporting year as reported by the National Weather Service. Units are pounds per day.

E_{2Seals} = The AP-42 estimate of emissions from a floating roof tank with primary and secondary seals. The material is assumed to be stored at a temperature equal to the maximum of the local monthly average temperatures during the emission inventory reporting year as reported by the National Weather Service. Units are pounds per day.

G_m = The area of measured seal gaps greater than 1/8 inch wide. Units are square inches.

G_a = The area of allowable seal gaps greater than 1/8 inch wide, equal to one square inch per foot of tank diameter. Units are square inches.

G_{8thL} = The length of measured seal gaps greater than 1/8 inch wide. Units are linear feet.

D = The diameter of the storage tank. Units are feet.

90 = Constant. Units are days.

(4) The owner or operator shall maintain records of any operational parameter monitoring required in §115.115(a) of this title (relating to Monitoring Requirements). Such records must be sufficient to demonstrate proper functioning of those devices to design specifications and must include, but are not limited to, the following.

(A) For a direct-flame incinerator, the owner or operator shall continuously record the exhaust gas temperature immediately downstream of the device.

(B) For a condensation system, the owner or operator shall continuously record the outlet gas temperature to ensure the temperature is below the manufacturer's recommended operating temperature for controlling the VOC vapors routed to the device.

(C) For a carbon adsorption system or carbon adsorber, the owner or operator shall:

(i) continuously record the exhaust gas VOC concentration of any carbon adsorption system monitored according to §115.115(a)(3)(A) of this title; or

(ii) record the date and time of each switch between carbon containers and the method of determining the carbon replacement interval if the carbon adsorption system or carbon adsorber is switched according to §115.115(a)(3)(B) of this title.

(D) For a catalytic incinerator, the owner or operator shall continuously record the inlet and outlet gas temperature.

(E) For a vapor recovery unit, the owner or operator shall maintain records of the continuous operational parameter monitoring required in §115.115(a)(5) of this title.

(F) For any other control device not listed in this paragraph, the owner or operator shall maintain records of the continuous operational parameter monitoring required in §115.115(a)(6) of this title sufficient to demonstrate proper functioning of the control device to design specifications.

(5) The owner or operator shall maintain the results of any testing conducted in accordance with §115.116 of this title (relating to Testing Requirements) or §115.117 of this title (relating to Approved Test Methods) at an affected site. Results may be maintained at an off-site location if made available for review within 24 hours.

(6) In the Houston-Galveston-Brazoria and Dallas-Fort Worth areas, the owner or operator shall maintain the following additional records.

(A) The owner or operator of a fixed roof storage tank that is not required in §115.112(d)(1) or (e)(1) of this title (relating to Control Requirements) to be equipped with an external floating roof, internal floating roof, or vapor control system shall maintain records of the type of VOC stored, the starting and ending dates when the material is stored, and the true vapor pressure at the average monthly storage temperature of the stored liquid. This requirement does not apply to a storage tank with storage capacity of 25,000 gallons or less storing VOC other than crude oil or condensate, or to a storage tank with storage capacity of 40,000 gallons or less storing crude oil or condensate.

(B) The owner or operator of any storage tank that stores crude oil or condensate prior to custody transfer or at a pipeline breakout station and is not equipped with a vapor control system shall maintain records of the estimated uncontrolled emissions from the storage tank on a rolling 12-month basis. The records must be made available for review within 72 hours upon request by authorized representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution control agency with jurisdiction.

(C) The owner or operator of an external floating roof or internal floating roof storage tank meeting the extended compliance date in §115.119(a)(1)(A) or (b)(1)(A) of this title (relating to Compliance Schedules) shall maintain records of the date of the last time the storage tank was emptied and degassed.

(D) The owner or operator of any storage tank that stores crude oil or condensate prior to custody transfer or at a pipeline breakout station in the Dallas-Fort Worth area and is required by §115.112(e) of this title to control flash emissions shall maintain records of the manufacturer or industry standard instructions used to maintain the storage tanks and tank closure devices in use.

(E) The owner or operator of any storage tank that stores crude oil or condensate prior to custody transfer or at a pipeline breakout station in the Dallas-Fort Worth area shall maintain records of the results of each inspection and repair required in §115.114(a)(5) or §115.112(e)(7) of this title, including the following items:

(i) the date of the inspection;

(ii) the status of the device during inspection;

(iii) the amount of time a closure device was open since the last inspection for reasons not allowed in §115.112(e)(7)(A) of this title;

(iv) the date repair was attempted and completed; and

(v) the list of closure devices awaiting delayed repair as allowed by §115.112(e)(7)(D) of this title.

(7) All records must be maintained for two years and be made available for review upon request by authorized representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution control agency with jurisdiction. In the Dallas-Fort Worth area, any records created on or after March 1, 2011, must be maintained for at least five years.

(b) The following recordkeeping requirements apply in Gregg, Nueces, and Victoria Counties.

(1) The owner or operator of an external floating roof storage tank that is exempt from the requirement for a secondary seal in accordance with §115.111(b)(1), (6), and (7) of this title and used to store VOC with a true vapor pressure greater than 1.0 psia shall maintain records of the type of VOC stored and the average monthly true vapor pressure of the stored liquid.

(2) The owner or operator shall record the results of inspections required by §115.114(b) of this title.

(3) In Victoria County, the owner or operator shall continuously record operational parameters of any of the following emission control devices installed to meet applicable control requirements in §115.112 of this title. Such records must be sufficient to demonstrate proper functioning of those devices to design specifications, including:

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

(B) the inlet and outlet gas temperature of a condensation system or catalytic incinerator; and

(C) the exhaust gas VOC concentration of any carbon adsorption system or carbon adsorber, to determine if breakthrough has occurred.

(4) The owner or operator shall maintain records of the results of any testing conducted in accordance with §115.117 of this title at an affected site.

(5) All records must be maintained for two years and be made available for review upon request by authorized representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution control agency with jurisdiction.

Adopted June 3, 2015 Effective June 25, 2015

§115.119. Compliance Schedules.

(a) In Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties, the compliance date has passed and the owner or operator of each storage tank in which any volatile organic compounds (VOC) are placed, stored, or held shall continue to comply with this division except as follows.

(1) The affected owner or operator shall comply with the requirements of §115.112(d); §115.115(a)(1), (2), (3)(A), and (4); §115.117; and §115.118(a) of this title (relating to Control Requirements; Monitoring Requirements; Approved Test Methods; and Recordkeeping Requirements, respectively) no later than January 1, 2009. Section 115.112(d) of this title no longer applies in the Houston-Galveston-Brazoria area beginning March 1, 2013. Prior to March 1, 2013, the owner or operator of a storage tank subject to §115.112(d) of this title shall continue to comply with §115.112(d) of this title until compliance has been demonstrated with the requirements of §115.112(e) of this title.

(A) If compliance with these requirements would require emptying and degassing of the storage tank, compliance is not required until the next time the storage tank is emptied and degassed but no later than January 1, 2017.

(B) The owner or operator of each storage tank with a storage capacity less than 210,000 gallons storing crude oil and condensate prior to custody transfer shall comply with the requirements of this division no later than January 1, 2009, regardless if compliance with these requirements would require emptying and degassing of the storage tank.

(2) The affected owner or operator shall comply with §§115.112(e), 115.115(a)(3)(B), (5), and (6), and 115.116 of this title (relating to Testing Requirements) as soon as practicable, but no later than March 1, 2013.

(A) If compliance with these requirements would require emptying and degassing of the storage tank, compliance is not required until the next time the storage tank is emptied and degassed but no later than January 1, 2017.

(B) The owner or operator of each storage tank with a storage capacity less than 210,000 gallons storing crude oil and condensate prior to custody transfer shall comply with these requirements no later than March 1, 2013, regardless if compliance with these requirements would require emptying and degassing of the storage tank.

(b) In Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties, the owner or operator of each storage tank in which any VOC is placed, stored, or held was required to be in compliance with this division on or before March 1, 2009, and shall continue to comply with this division, except as follows.

(1) The affected owner or operator shall comply with §§115.112(e), 115.115(a)(3)(B), (5), and (6), 115.116, and 115.118(a)(6) of this title as soon as practicable, but no later than March 1, 2013.

(A) If compliance with §115.112(e) of this title would require emptying and degassing of the storage tank, compliance is not required until the next time the storage tank is emptied and degassed but no later than December 1, 2021.

(B) The owner or operator of a storage tank with a storage capacity less than 210,000 gallons storing crude oil and condensate prior to custody transfer shall comply with these requirements no later than March 1, 2013, regardless if compliance with these requirements would require emptying and degassing of the storage tank.

(C) As soon as practicable but no later than 15 months after the commission publishes notice in the Texas Register that the Dallas-Fort Worth area, except Wise County, has been reclassified as a severe nonattainment area for the 1997 Eight-Hour Ozone National Ambient Air Quality Standard the owner or operator of a storage tank storing crude oil or condensate prior to custody transfer or at a pipeline breakout station is required to be in compliance with the control requirements in §115.112(e)(4)(B)(ii) and (5)(B)(ii) of this title except as specified in §115.111(a)(11) of this title (relating to Exemptions).

(2) The owner or operator is no longer required to comply with §115.112(a) of this title beginning March 1, 2013.

(3) The affected owner or operator in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties shall comply with §§115.112(e)(7), 115.114(a)(5), and 115.118(a)(6)(D) and (E) of this title as soon as practicable, but no later than January 1, 2017.

(c) In Hardin, Jefferson, and Orange Counties, the owner or operator of each storage tank in which any VOC is placed, stored, or held was required to be in compliance with this division by March 7, 1997, and shall continue to comply with this division, except that compliance with §115.115(a)(3)(B), (5), and (6), and §115.116 of this title is required as soon as practicable, but no later than March 1, 2013.

(d) In El Paso County, the owner or operator of each storage tank in which any VOC is placed, stored, or held was required to be in compliance with this division by January 1, 1996, and shall continue to comply with this division, except that compliance with §115.115(a)(3)(B), (5), and (6), and §115.116 of this title is required as soon as practicable, but no later than March 1, 2013.

(e) In Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties, the owner or operator of each storage tank in which any VOC is placed, stored, or held was required to be in compliance with this division by July 31, 1993, and shall continue to comply with this division, except that compliance with §115.116(b) of this title is required as soon as practicable, but no later than March 1, 2013.

(f) In Wise County, the owner or operator of each storage tank in which any VOC is placed, stored, or held shall comply with this division as soon as practicable, but no later than January 1, 2017.

(g) The owner or operator of each storage tank in which any VOC is placed, stored, or held that becomes subject to this division on or after the date specified in subsections (a) - (f) of this section, shall comply with the requirements in this division no later than 60 days after becoming subject.

(h) Upon the date the commission publishes notice in the Texas Register that the Wise County nonattainment designation for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard is no longer legally effective, the owner or operator of each storage tank in Wise County is not required to comply with any of the requirements in this division.

Adopted June 3, 2015 Effective June 25, 2015

SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES
DIVISION 2: VENT GAS CONTROL
§§115.120 - 115.123, 115.125 - 115.127, 115.129
Effective June 25, 2015

§115.120. Vent Gas Definitions.

The following words and terms, when used in this division (relating to Vent Gas Control), shall have the following meanings, unless the context clearly indicates otherwise. Additional definitions for terms used in this division are found in §§3.2, 101.1, and 115.10 of this title (relating to Definitions).

(1) **Bakery oven**--An oven for baking bread or any other yeast-leavened products.

(2) **Synthetic Organic Chemical Manufacturing Industry (SOCMI) batch distillation operation**--A SOCMI noncontinuous distillation operation in which a discrete quantity or batch of liquid feed is charged into a distillation unit and distilled at one time. After the initial charging of the liquid feed, no additional liquid is added during the distillation operation.

(3) **Synthetic Organic Chemical Manufacturing Industry (SOCMI) batch process**--Any SOCMI noncontinuous reactor process which is not characterized by steady-state conditions, and in which reactants are not added and products are not removed simultaneously.

(4) **Synthetic Organic Chemical Manufacturing Industry (SOCMI) distillation operation**--A SOCMI operation separating one or more feed stream(s) into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and vapor-phase as they approach equilibrium within the distillation unit.

(5) **Synthetic Organic Chemical Manufacturing Industry (SOCMI) distillation unit**--A SOCMI device or vessel in which distillation operations occur, including all associated internals (including, but not limited to, trays and packing), accessories (including, but not limited to, reboilers, condensers, vacuum pumps, and steam jets), and recovery devices (such as absorbers, carbon adsorbers, and condensers) which are capable of, and used for, recovering chemicals for use, reuse, or sale.

(6) **Synthetic Organic Chemical Manufacturing Industry (SOCMI) reactor process**--A SOCMI unit operation in which one or more chemicals,

or reactants other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed.

Adopted December 13, 2002 Effective January 17, 2003

§115.121. 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 shall apply.

(1) No person may allow a vent gas stream containing volatile organic compounds (VOC) to be emitted from any process vent, unless the vent gas stream is controlled properly in accordance with §115.122(a)(1) of this title (relating to Control Requirements). Vent gas streams include emissions from compressor rod packing that are contained and routed through a vent and emissions from a glycol dehydrator still vent.

(2) No person may allow a vent gas stream to be emitted from the following processes unless the vent gas stream is controlled properly in accordance with §115.122(a)(2) of this title:

(A) any synthetic organic chemical manufacturing industry reactor process or distillation operation;

(B) any air oxidation synthetic organic chemical manufacturing process;

(C) any liquid phase polypropylene manufacturing process;

(D) any liquid phase slurry high-density polyethylene manufacturing process; or

(E) any continuous polystyrene manufacturing process.

(3) In the Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, VOC emissions from bakery ovens, as defined in §115.10 of this title, shall be controlled properly in accordance with §115.122(a)(3) of this title.

(4) Any vent gas stream in the Houston-Galveston-Brazoria area which includes a highly-reactive volatile organic compound, as defined in §115.10 of this title, is subject to the requirements of Subchapter H of this chapter (relating to Highly-Reactive Volatile Organic Compounds) in addition to the applicable requirements of this division.

(b) In Nueces and Victoria Counties, no person may allow a vent gas stream to be emitted from any process vent containing one or more of the following VOC or classes of VOC, unless the vent gas stream is controlled properly in accordance with §115.122(b) of this title:

(1) emissions of ethylene associated with the formation, handling, and storage of solidified low-density polyethylene;

(2) emissions of the following specific VOC: ethylene, butadiene, isobutylene, styrene, isoprene, propylene, methylstyrene; and

(3) emissions of specified classes of VOC, including aldehydes, alcohols, aromatics, ethers, olefins, peroxides, amines, acids, esters, ketones, sulfides, and branched chain hydrocarbons (C_8 and above).

(c) For persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, the following emission specifications shall apply.

(1) No person may allow a vent gas stream to be emitted from any process vent containing one or more of the following VOC or classes of VOC, unless the vent gas stream is controlled properly in accordance with §115.122(c)(1) of this title:

(A) emissions of ethylene associated with the formation, handling, and storage of solidified low-density polyethylene;

(B) emissions of the following specific VOC: ethylene, butadiene, isobutylene, styrene, isoprene, propylene, and methylstyrene; and

(C) emissions of specified classes of VOC, including aldehydes, alcohols, aromatics, ethers, olefins, peroxides, amines, acids, esters, ketones, sulfides, and branched chain hydrocarbons (C_8 and above).

(2) No person may allow a vent gas stream to be emitted from any catalyst regeneration of a petroleum or chemical process system, basic oxygen furnace, or fluid coking unit into the atmosphere, unless the vent gas stream is properly controlled in accordance with §115.122(c)(2) of this title.

(3) No person may allow a vent gas stream to be emitted from any iron cupola into the atmosphere, unless the vent gas stream is properly controlled in accordance with §115.122(c)(3) of this title.

(4) Vent gas streams from blast furnaces shall be controlled properly in accordance with §115.122(c)(4) of this title.

Adopted June 3, 2015 Effective June 25, 2015

§115.122. Control Requirements.

(a) For all persons in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, the following control requirements shall apply.

(1) Any vent gas streams affected by §115.121(a)(1) of this title (relating to Emission Specifications) must be controlled properly with a control efficiency of at least 90% or to a volatile organic compound (VOC) concentration of no more than 20 parts per million by volume (ppmv) (on a dry basis corrected to 3.0% oxygen for combustion devices):

(A) in a direct-flame incinerator at a temperature equal to or greater than 1,300 degrees Fahrenheit;

(B) in a smokeless flare that is lit at all times when VOC vapors are routed to the flare; or

(C) by any other vapor control system, as defined in §115.10 of this title (relating to Definitions). A glycol dehydrator reboiler burning the vent stream from the still vent is a vapor control system.

(2) Any vent gas streams affected by §115.121(a)(2) of this title must be controlled properly with a control efficiency of at least 98% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices):

(A) in a smokeless flare that is lit at all times when VOC vapors are routed to the flare; or

(B) by any other vapor control system, as defined in §115.10 of this title.

(3) For the Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, VOC emissions from each bakery with a bakery oven vent gas stream(s) affected by §115.121(a)(3) of this title shall be reduced as follows.

(A) Each bakery in the Houston-Galveston-Brazoria area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 25 tons per calendar year shall ensure that the overall emission reduction from the uncontrolled VOC emission rate of the oven(s) is at least 80%.

(B) Each bakery in the Dallas-Fort Worth area, except in Wise County, with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 50 tons per calendar year, shall ensure that the overall emission reduction from the uncontrolled VOC emission rate of the oven(s) is at least 80%.

(C) Each bakery in the Dallas-Fort Worth with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 25 tons per calendar year, but less than 50 tons per calendar year, shall reduce total VOC emissions by at least 30% from the bakery's 1990 emissions inventory in accordance with the schedule specified in §115.129(d) of this title (relating to Counties and Compliance Schedules).

(D) Each bakery in the El Paso area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 25 tons per calendar year shall reduce total VOC emissions by at least 30% from the bakery's 1990 emissions inventory in accordance with the schedule specified in §115.129(e) of this title.

(E) Emission reductions in the 30% to 90% range are not creditable under Chapter 101, Subchapter H, Division 1 of this title (relating to Emission Credit Program) for the following bakeries:

(i) each bakery in the Houston-Galveston-Brazoria area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 25 tons per calendar year;

(ii) each bakery in the Dallas-Fort Worth area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 50 tons per calendar year;

(iii) each bakery in the El Paso area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 50 tons per calendar year.

(4) Any vent gas stream that becomes subject to the provisions of paragraphs (1), (2), or (3) of this subsection by exceeding provisions of §115.127(a) of this title (relating to Exemptions) shall remain subject to the provisions of this subsection, even if throughput or emissions later fall below the exemption limits unless and until emissions are reduced to no more than the controlled emissions level existing before implementation of the project by which throughput or emission rate was reduced to less than the applicable exemption limits in §115.127(a) of this title; and:

(A) the project by which throughput or emission rate was reduced is authorized by any permit or permit amendment or standard permit or permit by rule required by Chapter 116 or Chapter 106 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification; and Permits by Rule). If a permit by rule is available for the project, compliance with this subsection must be maintained for 30 days after the filing of documentation of compliance with that permit by rule; or

(B) if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator has given the executive director 30 days' notice of the project in writing.

(b) For all persons in Nueces and Victoria Counties, any vent gas streams affected by §115.121(b) of this title must be controlled properly with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices):

(1) in a direct-flame incinerator at a temperature equal to or greater than 1,300 degrees Fahrenheit;

(2) in a smokeless flare that is lit at all times when VOC vapors are routed to the flare; or

(3) by any other vapor control system, as defined in §115.10 of this title.

(c) For all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, the following control requirements shall apply.

(1) Any vent gas streams affected by §115.121(c)(1) of this title must be controlled properly:

(A) in a direct-flame incinerator at a temperature equal to or greater than 1,300 degrees Fahrenheit;

(B) in a smokeless flare that is lit at all times when VOC vapors are routed to the flare; or

(C) by any other vapor control system, as defined in §115.10 of this title, with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices).

(2) Any vent gas streams affected by §115.121(c)(2) of this title must be controlled properly:

(A) in a direct-flame incinerator or boiler at a temperature equal to or greater than 1,300 degrees Fahrenheit; or

(B) by any other vapor control system, as defined in §115.10 of this title, with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices).

(3) Any vent gas streams affected by §115.121(c)(3) of this title must be controlled properly:

(A) at a temperature equal to or greater than 1,300 degrees Fahrenheit in an afterburner having a retention time of at least one-fourth of a second, and having a steady flame that is not affected by the cupola charge and relights automatically if extinguished; or

(B) by any other vapor control system, as defined in §115.10 of this title, with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices).

(4) Any vent gas streams affected by §115.121(c)(4) of this title must be controlled properly:

(A) in a smokeless flare that is lit at all times when VOC vapors are routed to the flare or in a combustion device used in a heating process associated with the operation of a blast furnace; or

(B) by any other vapor control system, as defined in §115.10 of this title, with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices).

Adopted June 3, 2015 Effective June 25, 2015

§115.123. Alternate Control Requirements.

(a) The alternate control requirements for vent gas streams in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas are as follows.

(1) Alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division (relating to Vent Gas Control) 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.

(2) The owner or operator of a synthetic organic chemical manufacturing industry (SOCMI) reactor process or distillation operation in which vent gas stream emissions are controlled by a control device with a control efficiency of at least 90% which was installed before December 3, 1993 may request an alternate reasonably available control technology (ARACT) determination. The executive director may approve the ARACT if it is determined to be economically unreasonable to replace the control device with a new control device meeting the requirements of §115.122(a)(2) of this title (relating to Control Requirements). Each ARACT approved by the executive director shall include a requirement that the control device be operated at its maximum efficiency. Each ARACT shall only be valid until the control device undergoes a replacement, a modification as defined in 40 Code of Federal Regulations (CFR) §60.14 (October 17, 2000), or a reconstruction as defined in 40 CFR §60.15 (December 16, 1975), at which time the replacement, modified, or reconstructed control device shall meet the requirements of §115.122(a)(2) of this title. Any request for an ARACT determination shall be submitted to the executive director in writing no later than May 31, 1994. The executive director may direct the holder of an ARACT to reapply for an ARACT if it is more than ten years since the date of installation of the control device and there is good cause to believe that it is now economically reasonable to meet the requirements of §115.122(a)(2) of this title. Within three months of an executive director request, the holder of an ARACT shall reapply for an ARACT. If the reapplication for an ARACT is denied, the holder of the ARACT shall meet the requirements of §115.122(a)(2) of this title as soon as practicable, but no later than two years from the date of the executive director's written notification of denial.

(b) For all persons in Nueces and Victoria Counties, alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division may be approved by the executive director in accordance with §115.910 of this title if emission reductions are demonstrated to be substantially equivalent.

(c) For all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division may be approved by the executive director in accordance with §115.910 of this title if emission reductions are demonstrated to be substantially equivalent.

Adopted December 13, 2002 Effective January 17, 2003

§115.125. Testing Requirements.

Compliance with the emission specifications, vapor control system efficiency, and certain control requirements and exemption criteria of §§115.121 - 115.123 and 115.127 of this title (relating to Emission Specifications; Control Requirements; Alternate Control Requirements; and Exemptions) shall be determined by applying one or more of the

following test methods and procedures, as appropriate, when specifically required within this division, when required by the executive director under §101.8 of this title (relating to Sampling), or when the owner or operator elects to conduct testing of one or more vent gas streams.

(1) Flow rate. Test Methods 1-4 (40 Code of Federal Regulations (CFR) Part 60, Appendix A) are used for determining flow rates, as necessary.

(2) Concentration of volatile organic compounds (VOC).

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

(B) Test Method 21 (40 CFR Part 60, Appendix A-7) for determining VOC concentrations for the purpose of determining breakthrough on a carbon adsorption system or carbon adsorber.

(C) Test Method 25 (40 CFR Part 60, Appendix A) is used for determining total gaseous nonmethane organic emissions as carbon.

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

(3) Performance requirements for flares and vapor combustors.

(A) For flares, Test Method 22 (40 CFR Part 60, Appendix A) is used for visual determination of fugitive emissions from material sources and smoke emissions.

(B) For flares, additional test method requirements are described in 40 CFR §60.18(f), unless the United States Environmental Protection Agency (EPA) or the executive director has granted a waiver from such testing requirements.

(C) Flares in the Beaumont-Port Arthur, Dallas-Fort Worth, and Houston-Galveston-Brazoria areas shall comply with the performance test requirements of 40 CFR §60.18(b), unless EPA or the executive director has granted a waiver from such testing requirements.

(D) For vapor combustors, the owner or operator may consider the unit to be a flare. Each vapor combustor in Victoria County and the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas which the owner or operator elected to consider as a flare shall meet the performance test

requirements of 40 CFR §60.18(b) in lieu of any testing under paragraphs (1) and (2) of this section.

(E) Compliance with the requirements of 40 CFR §60.18(b) will be considered to demonstrate compliance with the emission specifications and control efficiency requirements of §115.121 and §115.122 of this title.

(4) Minor modifications. Minor modifications to these test methods may be used, if approved by the executive director.

(5) Alternate test methods. Test methods other than those specified in paragraphs (1) - (3) of this section may be used if validated by 40 CFR 63, Appendix A, Test Method 301. For the purposes of this paragraph, substitute "executive director" each place that Test Method 301 references "administrator."

Adopted June 3, 2015 Effective June 25, 2015

§115.126. Monitoring and Recordkeeping Requirements.

The owner or operator of any facility which emits volatile organic compounds (VOC) through a stationary vent in Aransas, Bexar, Calhoun, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties or in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas shall maintain the following information at the facility for at least five years. The owner or operator shall make the 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) Vapor control systems. For vapor control systems used to control emissions in Victoria County and in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas from vents subject to the provisions of §115.121 of this title (relating to Emission Specifications), records of appropriate parameters to demonstrate compliance, including:

(A) continuous monitoring and recording of:

(i) the exhaust gas temperature immediately downstream of a direct-flame incinerator;

(ii) the inlet and outlet gas temperatures of a catalytic incinerator or chiller;

(iii) the exhaust gas temperature immediately downstream of a vapor combustor. Alternatively, the owner or operator of a vapor combustor may

consider the unit to be a flare and meet the requirements specified in 40 Code of Federal Regulations (CFR) §60.18(b) and Chapter 111 of this title (relating to Control of Air Pollution from Visible Emissions and Particulate Matter) for flares; and

(iv) for a carbon adsorption system or carbon adsorber, as defined in §101.1 of this title (relating to Definitions), the owner or operator shall:

(I) continuously monitor the exhaust gas VOC concentration of a carbon adsorption system that regenerates the carbon bed directly to determine breakthrough. For the purpose of this subclause, breakthrough is defined as a measured VOC concentration exceeding 100 parts per million by volume above background expressed as methane; and

(II) switch the vent gas flow to fresh carbon at a regular predetermined time interval for a carbon adsorber or carbon adsorption system that does not regenerate the carbon directly. The time interval must be less than the carbon replacement interval determined by the maximum design flow rate and the VOC concentration in the gas stream vented to the carbon adsorption system or carbon adsorber.

(B) in the Beaumont-Port Arthur, Dallas-Fort Worth, and Houston-Galveston-Brazoria areas, the requirements specified in 40 CFR §60.18(b) and Chapter 111 of this title for flares; and

(C) for vapor control systems other than those specified in subparagraphs (A) and (B) of this paragraph, records of appropriate operating parameters.

(2) Test results. A record of the results of any testing conducted in accordance with §115.125 of this title (relating to Testing Requirements).

(3) Records for exempted vents. Records for each vent exempted from control requirements in accordance with §115.127 of this title (relating to Exemptions) shall be sufficient to demonstrate compliance with the applicable exemption limit, including the following, as appropriate:

(A) the pounds of ethylene emitted per 1,000 pounds of low-density polyethylene produced;

(B) the combined weight of VOC of each vent gas stream on a daily basis;

(C) the concentration of VOC in each vent gas stream on a daily basis;

(D) the maximum design flow rate or VOC concentration of each vent gas stream exempt under §115.127(a)(4)(C) of this title; and

(E) the total design capacity of process units exempt under §115.127(a)(4)(B) of this title.

(4) Alternative records for exempted vents. As an alternative to the requirements of paragraph (3)(B) and (C) of this section, records for each vent exempted from control requirements in accordance with §115.127 of this title and having a VOC emission rate or concentration less than the applicable exemption limits at maximum actual operating conditions shall be sufficient to demonstrate continuous compliance with the applicable exemption limit. These records shall include complete information from either test results or appropriate calculations which clearly documents that the emission characteristics at maximum actual operating conditions are less than the applicable exemption limit. This documentation shall include the operating parameter levels that occurred during any testing, and the maximum levels feasible (either VOC concentration or mass emission rate) for the process.

(5) Bakeries. For bakeries subject to §115.122(a)(3)(A) - (B) of this title (relating to Control Requirements), the following additional requirements apply.

(A) The owner or operator of each bakery in the Houston-Galveston-Brazoria area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 25 tons per calendar year, shall submit a control plan no later than March 31, 2001, to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction. The plan shall demonstrate that the overall emission reduction from the uncontrolled VOC emission rate of the oven(s) will be at least 80% by December 31, 2001. At a minimum, the control plan shall include the emission point number (EPN) and the facility identification number (FIN) of each bakery oven and any associated control device, a plot plan showing the location, EPN, and FIN of each bakery oven and any associated control device, and the 2000 VOC emission rates (consistent with the bakery's 2000 emissions inventory). The projected 2002 VOC emission rates shall be calculated in a manner consistent with the 2000 emissions inventory.

(B) All representations in control plans become enforceable conditions. It shall be unlawful for any person to vary from such representations if the variation will cause a change in the identity of the specific emission sources being controlled or the method of control of emissions unless the owner or operator of the bakery submits a revised control plan to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction within 30 days of the change. All control plans shall include documentation that the overall emission reduction from the uncontrolled VOC emission rate of the bakery's oven(s) continues to

be at least the specified percentage reduction. The emission rates shall be calculated in a manner consistent with the most recent emissions inventory.

(6) Bakeries (contingency measures). For bakeries subject to §115.122(a)(3)(C) and (D) of this title, the following additional requirements apply.

(A) No later than six months after the commission publishes notification in the Texas Register as specified in §115.129(d) or (e) of this title (relating to Counties and Compliance Schedules), the owner or operator of each bakery shall submit an initial control plan to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction which demonstrates that the overall reduction of VOC emissions from the bakery's 1990 emissions inventory will be at least 30%. At a minimum, the control plan shall include the EPN and the FIN of each bakery oven and any associated control device, a plot plan showing the location, EPN, and FIN of each bakery oven and any associated control device, and the 1990 VOC emission rates (consistent with the bakery's 1990 emissions inventory). The projected VOC emission rates shall be calculated in a manner consistent with the 1990 emissions inventory.

(B) In order to document continued compliance with §115.122(a)(3) of this title, the owner or operator of each bakery shall submit an annual report no later than March 31 of each year to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction which demonstrates that the overall reduction of VOC emissions from the bakery's 1990 emissions inventory during the preceding calendar year is at least 30%. At a minimum, the report shall include the EPN and FIN of each bakery oven and any associated control device, a plot plan showing the location, EPN, and FIN of each bakery oven and any associated control device, and the VOC emission rates. The emission rates for the proceeding calendar year shall be calculated in a manner consistent with the 1990 emissions inventory.

(C) All representations in control plans and annual reports become enforceable conditions. It shall be unlawful for any person to vary from such representations if the variation will cause a change in the identity of the specific emission sources being controlled or the method of control of emissions unless the owner or operator of the bakery submits a revised control plan to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction within 30 days of the change. All control plans and reports shall include documentation that the overall reduction of VOC emissions from the bakery's 1990 emissions inventory continues to be at least 30%. The emission rates shall be calculated in a manner consistent with the 1990 emissions inventory.

(7) Additional flare requirements. The owner or operator of a facility that uses a flare to meet the requirements of §115.122(a)(2) of this title shall install, calibrate, maintain, and operate according to the manufacturer's specifications, a heat-sensing

device, such as an ultraviolet beam sensor or thermocouple, at the pilot light to indicate continuous presence of a flame.

Adopted June 3, 2015 Effective June 25, 2015

§115.127. Exemptions.

(a) For all persons in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, the following exemptions apply. In cases where vent gas streams emanating from multiple process locations are combined, compliance with the exemptions of this section is determined after the combination of the streams but prior to the combined stream entering a control device, if present.

(1) A vent gas stream from a low-density polyethylene plant is exempt from the requirements of §115.121(a)(1) of this title (relating to Emission Specifications) if no more than 1.1 pounds of ethylene per 1,000 pounds of product are emitted from all the vent gas streams associated with the formation, handling, and storage of solidified product.

(2) The following vent gas streams are exempt from the requirements of §115.121(a)(1) of this title:

(A) a vent gas stream having a combined weight of volatile organic compounds (VOC) equal to or less than 100 pounds in any continuous 24-hour period;

(B) a vent gas stream specified in §115.121(a)(1) of this title with a concentration of VOC less than 612 parts per million by volume (ppmv);

(C) a vent gas stream which is subject to §115.121(a)(2) or (3) of this title; and

(D) a vent gas stream which qualifies for exemption under paragraphs (3), (4)(B), (4)(C), (4)(D), (4)(E), or (5) of this subsection.

(3) The following vent gas streams are exempt from the requirements of §115.121(a)(2)(B) - (E) of this title:

(A) a vent gas stream having a combined weight of VOC equal to or less than 100 pounds in any continuous 24-hour period;

(B) a vent gas stream from any air oxidation synthetic organic chemical manufacturing process with a concentration of VOC less than 612 ppmv; and

(C) a vent gas stream from any liquid phase polypropylene manufacturing process, any liquid phase slurry high-density polyethylene manufacturing process, and any continuous polystyrene manufacturing process with a concentration of VOC less than 408 ppmv.

(4) For synthetic organic chemical manufacturing industry (SOCMI) reactor processes and distillation operations, the following exemptions apply.

(A) Any reactor process or distillation operation that is designed and operated in a batch mode is exempt from the requirements of §115.121(a)(2)(A) of this title. For the purposes of this subparagraph, batch mode means any noncontinuous reactor process or distillation operation which is not characterized by steady-state conditions, and in which the addition of reactants does not occur simultaneously with the removal of products.

(B) Any reactor process or distillation operation operating in a process unit with a total design capacity of less than 1,100 tons per year, for all chemicals produced within that unit, is exempt from the requirements of §115.121(a)(2)(A) of this title.

(C) Any reactor process or distillation operation vent gas stream with a flow rate less than 0.388 standard cubic feet per minute or a VOC concentration less than 500 ppmv is exempt from the requirements of §115.121(a)(2)(A) of this title.

(D) Any distillation operation vent gas stream which meets the requirements of 40 Code of Federal Regulations (CFR) §60.660(c)(4) or §60.662(c) (concerning Subpart NNN--Standards of Performance for VOC Emissions From SOCMI Distillation Operations, December 14, 2000) is exempt from the requirements of §115.121(a)(2)(A) of this title.

(E) Any reactor process vent gas stream which meets the requirements of 40 CFR §60.700(c)(2) or §60.702(c) (concerning Subpart RRR--Standards of Performance for VOC Emissions From SOCMI Reactor Processes, December 14, 2000) is exempt from the requirements of §115.121(a)(2)(A) of this title.

(5) Bakeries are exempt from the requirements of §115.121(a)(3) and §115.122(a)(3) of this title (relating to Emission Specifications and Control Requirements) if the total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, is less than 25 tons per calendar year.

(6) A vent gas stream is exempt from this division if all of the VOCs in the vent gas stream originate from a source(s) for which another division within Chapter 115 (for example, Storage of Volatile Organic Compounds) has established a control

requirement(s), emission specification(s), or exemption(s) which applies to that VOC source category in that county.

(7) A combustion unit exhaust stream is exempt from this division provided that the unit is not being used as a control device for any vent gas stream which is subject to this division and which originates from a non-combustion source.

(8) As an alternative to complying with the requirements of this division (or, in the case of bakeries, as an alternative to complying with the requirements of §115.121(a)(1) and §115.122(a)(1) of this title) for a source that is addressed by a Chapter 115 contingency rule (i.e., one in which Chapter 115 requirements are triggered for that source by the commission publishing notification in the Texas Register that implementation of the contingency rule is necessary), the owner or operator of that source may instead choose to comply with the requirements of the contingency rule as though the contingency rule already had been implemented for that source. The owner or operator of each source choosing this option shall submit written notification to the executive director and any local air pollution control program with jurisdiction. When the executive director and the local program (if any) receive such notification, the source will then be considered subject to the contingency rule as though the contingency rule already had been implemented for that source.

(b) For all persons in Nueces and Victoria Counties, the following exemptions apply. In cases where vent gas streams emanating from multiple process locations are combined, compliance with the exemptions of this subsection is determined after the combination of the streams, but prior to the combined stream entering a control device, if present.

(1) A vent gas stream from a low-density polyethylene plant is exempt from the requirements of §115.121(b)(1) of this title if no more than 1.1 pounds of ethylene per 1,000 pounds of product are emitted from all the vent gas streams associated with the formation, handling, and storage of the solidified product.

(2) The following vent gas streams are exempt from the requirements of §115.121(b) of this title:

(A) a vent gas stream having a combined weight of the VOC or classes of compounds specified in §115.121(b)(2) and (3) of this title equal to or less than 100 pounds in any continuous 24-hour period; and

(B) a vent gas stream with a concentration of the VOC or classes of compounds specified in §115.121(b)(2) and (3) of this title less than 30,000 ppmv.

(3) A vent gas stream is exempt from this division if all of the VOCs in the vent gas stream originate from a source(s) for which another division within Chapter 115

(for example, Storage of Volatile Organic Compounds) has established a control requirement(s), emission specification(s), or exemption(s) which applies to that VOC source category in that county.

(4) A combustion unit exhaust stream is exempt from this division provided that the unit is not being used as a control device for any vent gas stream which is subject to this division and which originates from a non-combustion source.

(c) For all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, the following exemptions apply. In cases where vent gas streams emanating from multiple process locations are combined, compliance with the exemptions of this subsection is determined after the combination of the streams, but prior to the combined stream entering a control device, if present.

(1) The following vent gas streams are exempt from the requirements of §115.121(c)(1) of this title:

(A) a vent gas stream from a low-density polyethylene plant provided that no more than 1.1 pounds of ethylene per 1,000 pounds of product are emitted from all the vent gas streams associated with the formation, handling, and storage of solidified product;

(B) a vent gas stream having a combined weight of the VOC or classes of compounds specified in §115.121(c)(1)(B) - (C) of this title equal to or less than 100 pounds in any continuous 24-hour period; and

(C) a vent gas stream having a concentration of the VOC specified in §115.121(c)(1)(B) and (C) of this title less than 30,000 ppmv.

(2) A vent gas stream specified in §115.121(c)(2) of this title which emits less than or equal to five tons of total uncontrolled VOC in any one calendar year is exempt from the requirements of §115.121(c)(2) of this title.

(3) A vent gas stream is exempt from this division if all of the VOCs in the vent gas stream originate from a source(s) for which another division within Chapter 115 (for example, Storage of Volatile Organic Compounds) has established a control requirement(s), emission specification(s), or exemption(s) which applies to that VOC source category in that county.

(4) A combustion unit exhaust stream is exempt from this division provided that the unit is not being used as a control device for any vent gas stream which is subject to this division and which originates from a non-combustion source.

§115.129. Counties and Compliance Schedules.

(a) In Aransas, Bexar, Brazoria, Calhoun, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Matagorda, Montgomery, Nueces, Orange, San Patricio, Tarrant, Travis, Victoria, and Waller Counties, the compliance date has passed and the owner or operator of each vent gas stream shall continue to comply with this division.

(b) The owner or operator of each bakery in Collin, Dallas, Denton, and Tarrant Counties subject to §115.122(a)(3)(C) of this title (relating to Control Requirements) shall comply with §§115.121(a)(3), 115.122(a)(3)(C), and 115.126(6) of this title (relating to Emission Specifications; Control Requirements; and Monitoring and Recordkeeping Requirements) 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 Federal Clean Air Act (FCAA), §172(c)(9).

(c) The owner or operator of each bakery in El Paso County subject to §115.122(a)(3)(D) of this title shall comply with §§115.121(a)(3), 115.122(a)(3)(D), and 115.126(6) of this title 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 FCAA, §172(c)(9).

(d) The owner or operator of each vent gas stream in Ellis, Johnson, Kaufman, Parker, and Rockwall Counties shall comply with this division as soon as practicable, but no later than March 1, 2009.

(e) The owner or operator of each vent gas stream in Wise County shall comply with this division as soon as practicable, but no later than January 1, 2017.

(f) The owner or operator of a vent gas stream in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties that becomes subject to this division on or after the applicable compliance date in this section shall comply with the requirements in this division as soon as practicable, but no later than 60 days after becoming subject.

(g) Upon the date the commission publishes notice in the Texas Register that the Wise County nonattainment designation for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard is no longer legally effective, the owner or operator of

each vent gas stream in Wise County is not required to comply with any of the requirements in this division.

Adopted June 3, 2015 Effective June 25, 2015

SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES
DIVISION 3: WATER SEPARATION
§§115.131 - 115.133, 115.135 - 115.137, 115.139
Effective June 25, 2015

§115.131. Emission Specifications.

(a) For all persons in the Beaumont/Port Arthur, Dallas/ Fort Worth, El Paso, and Houston/ Galveston areas as defined in §115.10 of this title (relating to Definitions), any volatile organic compound (VOC) water separator equipped with a vapor recovery system in order to comply with §115.132(a) of this title (relating to Control Requirements) shall reduce emissions such that the true partial pressure of the VOC in vent gases to the atmosphere will not exceed a level of 0.5 psia (3.4 kPa).

(b) For all persons in Gregg, Nueces, and Victoria Counties, any VOC water separator equipped with a vapor recovery system in order to comply with §115.132(b) of this title shall reduce emissions such that the partial pressure of the VOC in vent gases to the atmosphere will not exceed a level of 1.5 psia (10.3 kPa).

(c) For all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, any VOC water separator equipped with a vapor recovery system in order to comply with §115.132(c) of this title shall reduce emissions such that the true partial pressure of the VOC in vent gases to the atmosphere will not exceed a level of 1.5 psia (10.3 kPa).

Adopted October 25, 1995 Effective November 20, 1995

§115.132. Control Requirements.

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, no person shall use any single or multiple compartment volatile organic compound (VOC) water separator which separates materials containing VOC obtained from any equipment which is processing, refining, treating, storing, or handling VOC, unless each compartment is controlled in one of the following ways:

(1) the compartment totally encloses the liquid contents and has all openings (such as roof seals and access doors) sealed such that the separator can hold a vacuum or pressure without emissions to the atmosphere, except through a pressure relief valve. All gauging and sampling devices shall be vapor-tight except during gauging or sampling. The pressure relief valve must be designed to open only as necessary to allow proper operation, and must be set at the maximum possible pressure necessary for proper operation, but such that the valve will not vent continuously;

(2) the compartment is equipped with a floating roof or internal floating cover which will rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof edge and tank wall. All gauging and sampling devices shall be vapor-tight except during gauging or sampling;

(3) the compartment is equipped with a vapor recovery system which satisfies the provisions of §115.131(a) of this title (relating to Emission Specifications);

(4) any water separator that becomes subject to the provisions of paragraphs (1), (2), or (3) of this subsection by exceeding provisions of §115.137(a) of this title (relating to Exemptions) will remain subject to the provisions of this subsection, even if throughput or emissions later fall below the exemption limits unless and until emissions are reduced to no more than the controlled emissions level existing before implementation of the project by which throughput or emission rate was reduced to less than the applicable exemption limits in §115.137(a) of this title; and

(A) the project by which throughput or emission rate was reduced is authorized by any permit or permit amendment or standard permit or permit by rule required by Chapter 116 or Chapter 106 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification; and Permits by Rule. If a permit by rule is available for the project, compliance with this subsection must be maintained for 30 days after the filing of documentation of compliance with that permit by rule; or

(B) if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner/operator has given the executive director 30 days' notice of the project in writing.

(b) For Gregg, Nueces, and Victoria Counties, no person shall use any single or multiple compartment VOC water separator which separates materials containing VOC obtained from any equipment which is processing, refining, treating, storing, or handling VOC, unless each compartment is controlled in one of the following ways:

(1) the compartment totally encloses the liquid contents and has all openings (such as roof seals and access doors) sealed such that the separator can hold a vacuum or pressure without emissions to the atmosphere, except through a pressure relief valve. All gauging and sampling devices shall be vapor-tight except during gauging or sampling. The pressure relief valve must be designed to open only as necessary to allow proper operation, and must be set at the maximum possible pressure necessary for proper operation, but such that the valve will not vent continuously;

(2) the compartment is equipped with a floating roof or internal floating cover which will rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof or cover edge and tank wall. All gauging and sampling devices shall be vapor-tight, except during gauging or sampling;

(3) the compartment is equipped with a vapor recovery system which satisfies the provisions of §115.131(b) of this title.

(c) For Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, no person shall use any single or multiple compartment VOC water separator which separates materials containing VOC obtained from any equipment which is processing, refining, treating, storing, or handling VOC, unless each compartment is controlled in one of the following ways:

(1) the compartment totally encloses the liquid contents and has all openings (such as roof seals and access doors) sealed such that the separator can hold a vacuum or pressure without emissions to the atmosphere, except through a pressure relief valve. All gauging and sampling devices shall be vapor-tight except during gauging or sampling. The pressure relief valve must be designed to open only as necessary to allow proper operation, and must be set at the maximum possible pressure necessary for proper operation, but such that the valve will not vent continuously;

(2) the compartment is equipped with a floating roof or internal floating cover which will rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof or cover edge and tank wall. All gauging and sampling devices shall be vapor-tight except during gauging or sampling;

(3) the compartment is equipped with a vapor recovery system which satisfies the provisions of §115.131(c) of this title.

Adopted April 26, 2002 Effective May 16, 2002

§115.133. Alternate Control Requirements.

Alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division (relating to Water Separation) may be approved by the executive director in accordance with §115.910 of this title (relating to Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.

Adopted April 26, 2002 Effective May 16, 2002

§115.135. Testing Requirements.

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, compliance with §115.131(a), §115.132(a), and §115.137 of this title (relating to Emission Specifications; Control Requirements; and Exemptions) shall be determined by applying the following test methods, as appropriate:

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

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

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

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

(5) determination of true vapor pressure at actual storage temperature using American Society for Testing Materials (ASTM) Test Methods D323, D2879, D4953, D5190, or D5191; using API Publication 2517, Third Edition, 1989 or standard reference texts to convert from Reid vapor pressure to true vapor pressure, where applicable;

(6) minor modifications to these test methods approved by the Executive Director.

(b) For Gregg, Nueces, and Victoria Counties, compliance with §115.131(b), §115.132(b), and §115.137(b) of this title shall be determined by applying the following test methods, as appropriate:

(1) Test Methods 1-4 (40 CFR 60, Appendix A) for determining flow rate, as necessary;

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

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

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

(5) determination of true vapor pressure at actual storage temperature using ASTM Test Methods D323, D2879, D4953, D5190, or D5191; and using API Publication 2517, Third Edition, 1989 or standard reference texts to convert from Reid vapor pressure to true vapor pressure, where applicable; or

(6) minor modifications to these test methods approved by the Executive Director.

Adopted October 25, 1995 Effective November 20, 1995

§115.136. Monitoring and Recordkeeping Requirements.

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following recordkeeping requirements shall apply.

(1) Any person who operates a single or multiple compartment volatile organic compound (VOC) water separator without the controls specified in §115.132(a) of this title (relating to Control Requirements) shall maintain complete and up-to-date records sufficient to demonstrate continuous compliance with the applicable exemption criteria including, but not limited to, the names and true vapor pressures of all such materials stored, processed, or handled at the affected property, and any other necessary operational information.

(2) Affected persons shall install and maintain monitors to continuously measure and record operational parameters of any emission control device installed to meet applicable control requirements. Such records must be sufficient to demonstrate proper functioning of those devices to design specifications, including:

(A) the exhaust gas temperature immediately downstream of any direct-flame incinerator;

(B) the gas temperature immediately upstream and downstream of any catalytic incinerator or chiller; and

(C) the VOC concentration of any carbon adsorption system exhaust gas to determine if breakthrough has occurred.

(3) Affected persons shall maintain the results of any testing conducted in accordance with the provisions specified in §115.135(a) of this title (relating to Testing Requirements).

(4) All records shall be maintained at the affected facility for at least two years and be made available upon request to representatives of the executive director, EPA, or any local air pollution control agency having jurisdiction in the area.

(b) For Gregg, Nueces, and Victoria Counties, the following recordkeeping requirements shall apply.

(1) Any person who operates a single or multiple compartment VOC water separator without the controls specified in §115.132(b) of this title shall maintain complete and up-to-date records sufficient to demonstrate continuous compliance with the applicable exemption criteria including, but not limited to, the names and true vapor pressures of all such materials stored, processed, or handled at the affected property, and any other necessary operational information.

(2) In Victoria County, affected persons shall install and maintain monitors to continuously measure and record operational parameters of any emission control device installed to meet applicable control requirements. Such records must be sufficient to demonstrate proper functioning of those devices to design specifications, including:

(A) the exhaust gas temperature immediately downstream of any direct-flame incinerator;

(B) the gas temperature immediately upstream and downstream of any catalytic incinerator or chiller; and

(C) the exhaust gas VOC concentration of any carbon adsorption system, as defined in §115.10 of this title (relating to Definitions), to determine if breakthrough has occurred.

(3) Affected persons shall maintain the results of any testing conducted in accordance with the provisions specified in §115.135(b) of this title.

(4) All records shall be maintained at the affected facility for at least two years and be made available upon request to representatives of the executive director, EPA, or any local air pollution control agency having jurisdiction in the area.

Adopted April 26, 2002 Effective May 16, 2002

§115.137. Exemptions.

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following exemptions shall apply.

(1) Any volatile organic compound (VOC) water separator used exclusively in conjunction with the production of crude oil or condensate is exempt from §115.132(a) of this title (relating to Control Requirements) if the emissions from the separator have a combined weight of VOC equal to or less than 100 pounds (45.4 kg) in any continuous 24-hour period. When emissions from multiple sources (including, but not limited to, VOC water separators, treaters, storage tanks, and saltwater disposal tanks) are routed through a common vent, the calculation of VOC emissions for

purposes of this exemption shall be based upon the total of all emission sources which are routed to the common vent. It is unacceptable to disconnect any of the multiple sources routed through a common vent for purposes of complying with this exemption.

(2) Any single or multiple compartment VOC water separator which separates materials having a true vapor pressure of VOC less than 0.5 pounds per square inch absolute (psia) (3.4 kPa) obtained from any equipment is exempt from §115.132(a) of this title.

(3) Any single or multiple compartment VOC water separator which is designed solely to capture stormwater, spills, or exterior surface cleanup waters is exempt from this division (relating to Water Separation), provided that the separator is fully covered. These separators are not required to be equipped with pressure/vacuum vents or vapor control systems.

(b) For Gregg, Nueces, and Victoria Counties, the following exemptions shall apply.

(1) VOC water separators used exclusively in conjunction with the production of crude oil or condensate are exempt from §115.132(b) of this title.

(2) Any single or multiple compartment VOC water separator which separates less than 200 gallons (757 liters) a day of materials containing VOC obtained from any equipment is exempt from §115.132(b) of this title.

(3) Any single or multiple compartment VOC water separator which separates materials having a true vapor pressure of VOC less than 1.5 psia (10.3 kPa) obtained from any equipment is exempt from §115.132(b) of this title.

(4) In Gregg County, any single or multiple compartment VOC water separator which separates materials obtained from any equipment in a facility other than a petroleum refinery is exempt from §115.132(b) of this title.

(5) Any single or multiple compartment VOC water separator which is designed solely to capture stormwater, spills, or exterior surface cleanup waters is exempt from this division, provided that the separator is fully covered. These separators are not required to be equipped with pressure/vacuum vents or vapor control systems.

(c) For Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, the following exemptions shall apply.

(1) VOC water separators used exclusively in conjunction with the production of crude oil or condensate are exempt from §115.132(c) of this title.

(2) Any single or multiple compartment VOC water separator which separates less than 200 gallons (757 liters) a day of materials containing VOC obtained from any equipment is exempt from §115.132(c) of this title.

(3) Any single or multiple compartment VOC water separator which separates materials having a true vapor pressure of VOC less than 1.5 psia (10.3 kPa) obtained from any equipment is exempt from §115.132(c) of this title.

(4) Any single or multiple compartment VOC water separator which is designed solely to capture stormwater, spills, or exterior surface cleanup waters is exempt from this division, provided that the separator is fully covered. These separators are not required to be equipped with pressure/vacuum vents or vapor control systems.

Adopted April 26, 2002 Effective May 16, 2002

§115.139. Counties and Compliance Schedules.

(a) In Aransas, Bexar, Brazoria, Calhoun, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Gregg, Hardin, Harris, Jefferson, Liberty, Matagorda, Montgomery, Nueces, Orange, San Patricio, Tarrant, Travis, Victoria, and Waller Counties the compliance date has passed and the owner or operator of each volatile organic compound (VOC) water separator shall continue to comply with this division.

(b) The owner or operator of each VOC water separator in Ellis, Johnson, Kaufman, Parker, and Rockwall Counties shall comply with this division as soon as practicable, but no later than March 1, 2009.

(c) The owner or operator of each VOC water separator in Wise County shall comply with this division as soon as practicable, but no later than January 1, 2017.

(d) The owner or operator of a water separator in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties that becomes subject to this division on or after the applicable compliance date in subsection (a), (b) or (c) of this section, shall be in compliance with the requirements in this division as soon as practicable, but no later than 60 days after becoming subject.

(e) Upon the date the commission publishes notice in the Texas Register that the Wise County nonattainment designation for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard is no longer legally effective, the owner or operator of each water separator in Wise County is not required to comply with any of the requirements in this division.

Adopted June 3, 2015 Effective June 25, 2015

SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES
DIVISION 4: INDUSTRIAL WASTEWATER
§§115.140, 115.142 - 115.149
Effective December 7, 2006

§115.140. Industrial Wastewater Definitions.

The following terms, when used in this division, shall have the following meanings, unless the context clearly indicates otherwise. Additional definitions for terms used in this division are found in §§115.10, 101.1, and 3.2 of this title (relating to Definitions).

(1) **Affected source category**--Any of the following source categories:

(A) organic chemicals, plastics, and synthetic fibers manufacturing industry under Standard Industrial Classification (SIC) codes 2821, 2823, 2824, 2865, and 2869;

(B) pesticides manufacturing industry under SIC code 2879;

(C) petroleum refining industry under SIC code 2911;

(D) pharmaceutical manufacturing industry under SIC codes 2833, 2834, and 2836;

(E) hazardous waste treatment, storage, and disposal facilities industry under SIC codes 4952, 4953, and 4959.

(2) **Affected volatile organic compound (VOC) wastewater stream**--A VOC wastewater stream from an affected source category with either a VOC concentration greater than or equal to 10,000 parts per million by weight (ppmw) or a VOC concentration greater than or equal to 1,000 ppmw and a flow rate greater than or equal to 10 liters per minute (2.64 gallons per minute), as determined in accordance with §115.148 of this title (relating to Determination of Wastewater Characteristics).

(3) **Plant**--All facilities included within the same commission account number.

(4) **Point of generation**--The location where a VOC wastewater stream exits a process unit.

(5) **Properly operated biotreatment unit**--A suspended growth process that generates biomass and recycles biomass to maintain biomass

concentrations in the treatment unit. The average concentration of suspended biomass maintained in the aeration basin of a properly operated biotreatment unit shall equal or exceed 1.0 kilogram per cubic meter (kg/m^3), measured as total suspended solids.

(6) **Volatile organic compounds (VOC) wastewater**--Water which, as part of a facility process, has come into contact with VOC and is intended for treatment, disposal, or discharge without further use in the process unit.

(7) **Water seal controls**--A seal pot, p-leg trap, or other type of trap filled with water (e.g., flooded sewers that maintain water levels adequate to prevent air flow through the system) that creates a water barrier between the water level of the seal and the atmosphere. The water level of the seal must be maintained in the vertical leg of a drain in order to be considered a water seal.

(8) **Wet weather retention basin**--An impoundment or tank that is used to store rainfall runoff that would exceed the capacity of the wastewater treatment system until it can be returned to the wastewater treatment system or, if the water meets the applicable discharge limits, discharged without treatment. These units may also be used to store wastewater during periods when the wastewater treatment system is shut down for maintenance or emergencies.

Adopted April 26, 2002 Effective May 16, 2002

§115.142. Control Requirements.

The owner or operator of an affected source category within a plant in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, as defined in §115.10 of this title (relating to Definitions), shall comply with the following control requirements. Any component of a wastewater storage, handling, transfer, or treatment facility, if the component contains an affected volatile organic compounds (VOC) wastewater stream, shall be controlled in accordance with either paragraph (1) or (2) of this section, except for properly operated biotreatment units which shall meet the requirements of paragraph (3) of this section. In the Dallas/Fort Worth and El Paso areas, and until December 31, 2002 in the Houston/Galveston area, the control requirements apply from the point of generation of an affected VOC wastewater stream until the affected VOC wastewater stream is either returned to a process unit or is treated to remove VOC so that the wastewater stream no longer meets the definition of an affected VOC wastewater stream. In the Beaumont/Port Arthur area, and after December 31, 2002 in the Houston/Galveston area, the control requirements apply from the point of generation of an affected VOC wastewater stream until the affected VOC wastewater stream is either returned to a process unit, or is treated to reduce the VOC content of the wastewater stream by 90% by weight and also reduce the VOC content of the same VOC wastewater stream to less than 1,000 parts per million by weight. For wastewater streams which are combined and then treated to remove VOC,

the amount of VOC to be removed from the combined wastewater stream shall be at least the total amount of VOC that would be removed to treat each individual affected VOC wastewater stream so that they no longer meet the definition of affected VOC wastewater stream, except for properly operated biotreatment units which shall meet the requirements of paragraph (3) of this section. For this division, a component of a wastewater storage, handling, transfer, or treatment facility shall include, but is not limited to, wastewater storage tanks, surface impoundments, wastewater drains, junction boxes, lift stations, weirs, and oil-water separators.

(1) The wastewater component shall meet the following requirements.

(A) All components shall be fully covered or be equipped with water seal controls. For any component equipped with water seal controls, the only acceptable alternative to water as the sealing liquid in a water seal is the use of ethylene glycol, propylene glycol, or other low vapor pressure antifreeze, which may be used only during the period of November through February. For any process drain not equipped with water seal controls, the process drain shall be equipped with a gasketed seal, or a tightly-fitting cap or plug.

(B) All openings shall be closed and sealed, except when the opening is in actual use for its intended purpose or the component is maintained at a pressure less than atmospheric pressure.

(C) All liquid contents shall be totally enclosed.

(D) For junction boxes and vented covers, the following requirements apply.

(i) In the Dallas/Fort Worth and El Paso areas, and until December 31, 2002 in the Houston/Galveston area, if any cover, other than a junction box cover, is equipped with a vent, the vent shall be equipped with either a vapor control system which maintains a minimum control efficiency of 90% or a closed system which prevents the flow of VOC vapors from the vent during normal operation. Any junction box vent shall be equipped with a vent pipe at least 90 centimeters (cm) (36 inches (in.)) in length and no more than 10.2 cm (4.0 in.) in diameter.

(ii) In the Beaumont/Port Arthur area, and after December 31, 2002 in the Houston/Galveston area, the following requirements apply.

(I) If any cover or junction box cover, except for junction boxes described in subclause (II) of this clause, is equipped with a vent, the vent shall be equipped with either a vapor control system which maintains a minimum control efficiency of 90% or a closed system which prevents the flow of VOC vapors from the vent during normal operation.

(II) Any junction box that is filled and emptied by gravity flow (i.e., there is no pump) or is operated with no more than slight fluctuations in the liquid level may be vented to the atmosphere, provided it is equipped with:

(-a-) a vent pipe at least 90 cm (36 in.) in length and no more than 10.2 cm (4.0 in.) in diameter; and

(-b-) water seal controls which are installed and maintained at the wastewater entrance(s) to or exit from the junction box restricting ventilation in the individual drain system and between components in the individual drain system.

(E) All gauging and sampling devices shall be vapor-tight except during gauging or sampling.

(F) Any loading or unloading to or from a portable container by pumping shall be performed with a submerged fill pipe.

(G) All seals and cover connections shall be maintained in proper condition. For purposes of this paragraph, "proper condition" means that covers shall have a tight seal around the edge and shall be kept in place except as allowed by this division, that seals shall not be broken or have gaps, and that sewer lines shall have no visible gaps or cracks in joints, seals, or other emission interfaces.

(H) If any seal or cover connection is found to not be in proper condition, a first attempt at repair shall be made no later than five calendar days after the leak or improper condition is found. The repair or correction shall be completed as soon as possible but no later than 15 calendar days after detection, unless the repair or correction is technically infeasible without requiring a process unit shutdown, in which case the repair or correction shall be made at the next process unit shutdown. Test Method 21 must be used to confirm that a leak or improper condition is repaired, and the following records shall be maintained:

(i) the date on which a leak or improper condition is discovered;

(ii) the date on which a first attempt at repair was made to correct the leak or improper condition;

(iii) the date on which a leak or improper condition is repaired; and

(iv) the date and instrument reading of the recheck procedure after a leak or improper condition is repaired.

(2) If a wastewater component is equipped with an internal or external floating roof, it shall meet the following requirements.

(A) All openings in an internal or external floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents shall provide a projection below the liquid surface or be equipped with a cover, seal, or lid. Any cover, seal, or lid shall be in a closed (i.e., no visible gap) position at all times except when the opening is in actual use for its intended purpose.

(B) Automatic bleeder vents (vacuum breaker vents) shall be closed at all times except when the roof is being floated off or landed on the roof leg supports.

(C) Rim vents, if provided, shall be set to open only when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

(D) Any roof drain that empties into the stored liquid shall be provided with a slotted membrane fabric cover that covers at least 90% of the area of the opening.

(E) There shall be no visible holes, tears, or other openings in any seal or seal fabric.

(F) For external floating roof storage tanks, the secondary seals shall be the rim-mounted type (i.e., the seal shall be continuous from the floating roof to the tank wall). The accumulated area of gaps that exceed 1/8 in. (0.32 cm) in width between the secondary seal and tank wall shall be no greater than 1.0 $in.^2$ per foot (21 cm^2/meter) of tank diameter.

(3) In the Beaumont/Port Arthur area, and after December 31, 2002 in the Houston/Galveston area, each properly operated biotreatment unit shall meet the following requirements.

(A) The VOC content of the wastewater shall be reduced by 90% by weight; and

(B) The average concentration of suspended biomass maintained in the aeration basin of the biotreatment unit shall equal or exceed 1.0 kilogram per cubic meter (kg/m^3), measured as total suspended solids.

(4) Any wastewater component that becomes subject to this division by exceeding the provisions of §115.147 of this title (relating to Exemptions) or an affected

VOC wastewater stream as defined in §115.140 of this title (relating to Industrial Wastewater Definitions) will remain subject to the requirements of this division, even if the component later falls below those provisions, unless and until emissions are reduced to no more than the controlled emissions level existing prior to the implementation of the project by which throughput or emission rate was reduced to less than the applicable exemption levels in §115.147 of this title; and

(A) the project by which throughput or emission rate was reduced is authorized by any permit or permit amendment or standard permit or permit by rule required by Chapter 116 or Chapter 106 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification; and Permits by Rule). If a permit by rule is available for the project, compliance with this division must be maintained for 30 days after the filing of documentation of compliance with that permit by rule; or

(B) if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator has given the executive director 30 days' notice of the project in writing.

Adopted December 13, 2002 Effective January 17, 2003

§115.143. Alternate Control Requirements.

(a) Alternate means of control. Alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division (relating to Industrial Wastewater) 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.

(b) 90% overall control option. As an alternative to the control requirements of §115.142 of this title (relating to Control Requirements), the owner or operator of a wastewater storage, handling, transfer, or treatment facility may elect to ensure that the overall control of volatile organic compounds (VOC) emissions at the account from wastewater from affected source categories is at least 90% less than the 1990 baseline emissions inventory, provided that the following requirements are met.

(1) To qualify for the control option available under this subsection after December 31, 1996, the owner or operator of a wastewater component for which a control plan was not previously submitted shall submit a control plan to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction which demonstrates that the overall control of VOC emissions at the account from wastewater from affected source categories will be at least 90% less than the 1990 baseline emissions inventory. Any control plan submitted after December 31, 1996, must be approved by the executive director before the owner or operator may use

the control option available under this subsection for compliance. At a minimum, the control plan shall include the applicable emission point number (EPN); the facility identification number (FIN); the calendar year 1990 emission rates of wastewater from affected source categories (consistent with the 1990 emissions inventory); a plot plan showing the location, EPN, and FIN associated with a wastewater storage, handling, transfer, or treatment facility; the VOC emission rates for the preceding calendar year; and an explanation of the recordkeeping procedure and calculations which will be used to demonstrate compliance. The VOC emission rates shall be calculated in a manner consistent with the 1990 emissions inventory.

(2) The owner or operator shall submit an annual report no later than March 31 of each year to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction, which demonstrates that the overall control of VOC emissions at the account from wastewater from affected source categories during the preceding calendar year is at least 90% less than the 1990 baseline emissions inventory. At a minimum, the report shall include the EPN; FIN; the throughput of wastewater from affected source categories; a plot plan showing the location, EPN, and FIN associated with a wastewater storage, handling, transfer, or treatment facility; and the VOC emission rates for the preceding calendar year. The emission rates for the preceding calendar year shall be calculated in a manner consistent with the 1990 emissions inventory.

(3) All representations in control plans and annual reports become enforceable conditions. It shall be unlawful for any person to vary from such representations if the variation will cause a change in the identity of the specific emission sources being controlled or the method of control of emissions unless the owner or operator submits a revised control plan to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction no later than 30 days after the change. All control plans and reports shall include documentation that the overall reduction of VOC emissions at the account from wastewater from affected source categories continues to be at least 90% less than the 1990 baseline emissions inventory. The emission rates shall be calculated in a manner consistent with the 1990 emissions inventory.

(c) The owner or operator of an affected source category within a plant may elect to comply with the provisions of 40 Code of Federal Regulations 63, Subpart G (National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, January 22, 2001) as an alternative to complying with this division, provided that:

(1) the term "VOC" is substituted each place that Subpart G references the term "hazardous air pollutant" or "HAP";

(2) in Table 9 of Appendix to Subpart G - Table and Figures, the average fraction removed (FR) value required for VOC not specifically listed in this table is 0.90; and

(3) before implementing the option available under this subsection, the owner or operator provides written notice to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction of the intention to use this option.

Adopted December 13, 2002 Effective January 17, 2003

§115.144. Inspection and Monitoring Requirements.

The owner or operator of an affected source category within a plant in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas shall comply with the following inspection and monitoring requirements.

(1) All seals and covers used to comply with §115.142(1) of this title (relating to Control Requirements) shall be inspected according to the following schedules to ensure compliance with §115.142(1)(G) and (H) of this title:

(A) initially and semiannually thereafter to ensure compliance with §115.142(1)(G) of this title; and

(B) upon completion of repair to ensure compliance with §115.142(1)(G) and (H) of this title.

(2) Floating roofs and internal floating covers used to comply with §115.142(2) of this title shall be subject to the following requirements. All secondary seals shall be inspected according to the following schedules to ensure compliance with §115.142(2)(E) and (F) of this title.

(A) If the primary seal is vapor-mounted, the secondary seal gap area shall be physically measured annually to ensure compliance with §115.142(2)(F) of this title.

(B) If the tank is equipped with a mechanical shoe or liquid-mounted primary seal, compliance with §115.142(2)(F) of this title may be determined by visual inspection.

(C) All secondary seals shall be visually inspected semiannually to ensure compliance with §115.142(2)(E) and (F) of this title.

(3) Monitors shall be installed and maintained as required by this section to measure operational parameters of any emission control device or other device installed to comply with §115.142 of this title. Such monitoring and parameters shall be sufficient to demonstrate proper functioning of those devices to design specifications, and include the monitoring and parameters listed in subparagraphs (A) - (H) of this paragraph, as applicable. In lieu of the monitoring and parameters listed in subparagraphs (A) - (H) of this paragraph, other monitoring and parameters may be approved or required by the executive director:

(A) for an enclosed non-catalytic combustion device (including, but not limited to, a thermal incinerator, boiler, or process heater), continuously monitor and record the temperature of the gas stream either in the combustion chamber or immediately downstream before any substantial heat exchange;

(B) for a catalytic incinerator, continuously monitor and record the temperature of the gas stream immediately before and after the catalyst bed;

(C) for a condenser (chiller), continuously monitor and record the temperature of the gas stream at the condenser exit;

(D) for a carbon adsorber, continuously monitor and record the VOC concentration of exhaust gas stream to determine if breakthrough has occurred. If the carbon adsorber does not regenerate the carbon bed directly in the control device (e.g., a carbon canister), the exhaust gas stream shall be monitored daily or at intervals no greater than 20% of the design replacement interval, whichever is greater, or as an alternative to conducting monitoring, the carbon may be replaced with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and the VOC concentration in the gas stream vented to the carbon adsorber;

(E) for a flare, meet the requirements specified in 40 Code of Federal Regulations §60.18(b) and Chapter 111 of this title (relating to Control of Air Pollution from Visible Emissions and Particulate Matter);

(F) for a steam stripper, continuously monitor and record the steam flow rate, the wastewater feed mass flow rate, the wastewater feed temperature, and condenser vapor outlet temperature;

(G) for a vapor combustor, continuously monitor and record the exhaust gas temperature either in the combustion chamber or immediately downstream before any substantial heat exchange. Alternatively, the owner or operator of a vapor combustor may consider the unit to be a flare and meet the requirements of subparagraph (E) of this paragraph; and

(H) for vapor control systems other than those specified in subparagraphs (A) - (G) of this paragraph, continuously monitor and record the appropriate operating parameters.

(4) In the Beaumont/Port Arthur and Houston/Galveston areas, units used to comply with §115.142(3) of this title shall:

(A) initially demonstrate a 90% reduction in VOCs by using the methods in §115.145 of this title (relating to Approved Test Methods); and

(B) measure on a weekly basis the total suspended solids in the aeration basin of the biotreatment unit.

(5) All water seal controls shall be inspected weekly to ensure that the water seal controls are effective in preventing ventilation, except that daily inspections are required for those seals that have failed three or more inspections in any 12-month period. Upon request by the executive director, EPA, or any local program with jurisdiction, the owner or operator shall demonstrate (e.g., by visual inspection or smoke test) that the water seal controls are properly designed and restrict ventilation.

(6) All process drains not equipped with water seal controls shall be inspected monthly to ensure that all gaskets, caps, and/or plugs are in place and that there are no gaps, cracks, or other holes in the gaskets, caps, and/or plugs. In addition, all caps and plugs shall be inspected monthly to ensure that they are tightly-fitting.

Adopted December 13, 2002 Effective January 17, 2003

§115.145. Approved Test Methods.

Compliance with the emission specifications, vapor control system efficiency, and certain control requirements, inspection requirements, and exemption criteria of §§115.142 - 115.144 and 115.147 of this title (relating to Control Requirements; Alternate Control Requirements; Inspection and Monitoring Requirements; and Exemptions) shall be determined by applying one or more of the following test methods and procedures, as appropriate.

(1) Gas flow rate. Test Methods 1-4 (40 Code of Federal Regulations (CFR) Part 60, Appendix A) are used for determining gas flow rates, as necessary.

(2) Concentration of Volatile Organic Compounds (VOC).

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

(B) Test Method 25 (40 CFR 60, Appendix A) is used for determining total gaseous nonmethane organic emissions as carbon.

(C) Test Methods 25A or 25B (40 CFR 60, Appendix A) are used for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis.

(3) Performance requirements for flares and vapor combustors.

(A) For flares, the performance test requirements of 40 CFR 60.18(b) shall apply.

(B) For vapor combustors, the owner or operator may consider the unit to be a flare and meet the performance test requirements of 40 CFR 60.18(b) rather than the procedures of paragraphs (1) and (2) of this section.

(C) Compliance with the requirements of 40 CFR 60.18(b) will be considered to represent 98% control of the VOC in the flare inlet.

(4) Vapor pressure. Use standard reference texts or American Society for Testing and Materials (ASTM) Test Methods D323-89, D2879, D4953, D5190, or D5191 for the measurement of vapor pressure, adjusted for actual storage temperature in accordance with American Petroleum Institute Publication 2517, Third Edition, 1989.

(5) Leak determination by instrument method. Use Test Method 21 (40 CFR 60, Appendix A) for determining VOC leaks and for monitoring a carbon canister in accordance with §115.144(3)(D) of this title.

(6) Determination of VOC concentration of wastewater samples. Use Test Method 5030 (purge and trap) followed by Test Method 8015 with a DB-5 boiling point (or equivalent column), and flame ionization detector, with the detector calibrated with benzene (SW-846 and 40 CFR Part 261); Test Methods 3810, 5030 (followed by 8020), 8240, 8260, and 9060 (SW-846 and 40 CFR Part 261); Test Methods 602 and 624 (40 CFR Part 136); Test Method 5310(B) (Standard Methods 17th Edition); or Test Method 25D (40 CFR Part 60, Appendix A).

(7) Determination of total suspended solids. Use Method 160.2 (Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020) or Method 2540D (Standard Methods for the Examination of Water and Wastewater, 18th Edition, American Public Health Association).

(8) Determination of biotreatment unit efficiency. Use the methods found in 40 CFR 63 Appendix C or 40 CFR 63.145. A stream-specific list of VOCs shall be used and is determined as follows:

(A) compounds with concentrations below one part per million by weight (ppmw) or below the lower detection limit may be excluded;

(B) for the owner or operator that can identify at least 90% by weight of the VOCs in the wastewater stream, the individual VOCs that are 5.0% by weight or greater are required to be included on the list. If less than half of the total VOCs in the wastewater are represented by the compounds that are 5.0% by weight or greater, the owner or operator shall include those individual VOCs with the greatest mass on the stream-specific list of VOCs until 75 compounds or every compound, whichever is fewer, is included on the list, except as provided by subparagraph (A) of this paragraph. The owner or operator shall document that the site-specific list of VOCs is representative of the process wastewater stream; and

(C) for the owner or operator that can identify at least 50% by weight of the VOCs in the wastewater stream, the individual VOCs with the greatest mass on the stream-specific list of VOCs up to 75 compounds or every compound, whichever is fewer, shall be included on the list, except as provided by subparagraph (A) of this paragraph. The owner or operator shall document that the site-specific list of VOCs is representative of the process wastewater stream.

(9) Minor modifications. Minor modifications to these test methods may be used, if approved by the executive director.

(10) Alternate test methods. Test methods other than those specified in paragraphs (1) - (8) of this section may be used if validated by 40 CFR 63, Appendix A, Test Method 301 (effective December 29, 1992). For the purposes of this paragraph, substitute "executive director" each place that Test Method 301 references "administrator."

Adopted April 26, 2002 Effective May 16 2002

§115.146. Recordkeeping Requirements.

The owner or operator of an affected source category within a plant in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas shall comply with the following recordkeeping requirements.

(1) Complete and up-to-date records shall be maintained as needed to demonstrate compliance with §115.142 and §115.143 of this title (relating to Control Requirements; and Alternate Control Requirements) which are sufficient to demonstrate the characteristics of wastewater streams and the qualification for any exemptions claimed under §115.147 of this title (relating to Exemptions).

(2) Records shall be maintained of the results of any inspection or monitoring conducted in accordance with §115.144 of this title (relating to Inspection and Monitoring Requirements). Records shall be sufficient to demonstrate proper functioning of applicable control equipment to design specifications to ensure compliance with §115.142 and §115.143 of this title.

(3) Records shall be maintained of the results of any testing conducted in accordance with §115.145 of this title (relating to Approved Test Methods).

(4) All records shall be maintained at the plant for at least two years and be made available upon request to representatives of the executive director, EPA, or any local air pollution control agency having jurisdiction in the area.

Adopted October 27, 1999 Effective November 18, 1999

§115.147. Exemptions.

The following exemptions apply in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas.

(1) Any plant with an annual volatile organic compounds (VOC) loading in wastewater, as determined in accordance with §115.148 of this title (relating to Determination of Wastewater Characteristics), less than or equal to ten megagrams (Mg) (11.03 tons) is exempt from the control requirements of §115.142 of this title (relating to Control Requirements).

(2) At any plant with an annual VOC loading in wastewater, as determined in accordance with §115.148 of this title greater than ten Mg (11.03 tons), any person who is the owner or operator of the plant may exempt from the control requirements of §115.142 of this title one or more affected VOC wastewater streams for which the sum of the annual VOC loading in wastewater for all of the exempted streams is less than or equal to ten Mg (11.03 tons).

(3) Unless specifically required by this division (relating to Industrial Wastewater), any piece of equipment of a wastewater storage, handling, transfer, or treatment facility to which the control requirements of §115.142 of this title apply is exempt from the requirements of any other division of this chapter. This paragraph does not apply to pieces of equipment or components which are subject to the requirements of Subchapter D, Division 3, and/or Subchapter H of this chapter (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas; and Highly-Reactive Volatile Organic Compounds).

(4) If compliance with the control requirements of §115.142 of this title would create a safety hazard in a component of a wastewater storage, handling, transfer, or treatment facility, the owner or operator may request the executive director to exempt that component from the control requirements of §115.142 of this title. The executive director shall approve the request if justified by the likelihood and magnitude of the potential injury and if the executive director determines that reducing or eliminating the hazard is technologically or economically unreasonable based on the emissions reductions that would be achieved.

(5) Wet weather retention basins are exempt from the requirements of this division.

(6) Petroleum refineries in the Beaumont/Port Arthur area are exempt from the requirements of this division.

(7) The following exemptions apply to petroleum refineries in the Houston/Galveston area.

(A) Petroleum refineries are exempt from the requirement in §115.142 of this title that after December 31, 2002, the control requirements apply from the point of generation of an affected VOC wastewater stream until the affected VOC wastewater stream is either returned to a process unit, or is treated to reduce the VOC content of the wastewater stream by 90% by weight and also reduce the VOC content of the same VOC wastewater stream to less than 1,000 parts per million by weight, provided that petroleum refineries continue to apply the requirement in §115.142 of this title that the control requirements apply from the point of generation of an affected VOC wastewater stream until the affected VOC wastewater stream is either returned to a process unit, or is treated to remove VOC so that the wastewater stream no longer meets the definition of an affected VOC wastewater stream.

(B) Junction boxes are exempt from the requirements of §115.142(1)(D)(ii) of this title, provided that after December 31, 2002 they continue to comply with the requirements of §115.142(1)(D)(i) of this title.

(C) Properly operated biotreatment units are exempt from the requirements of §§115.142(3), 115.144(4), and 115.145(7) and (8) of this title (relating to Control Requirements; Inspection and Monitoring Requirements; and Approved Test Methods).

Adopted December 13, 2002 Effective January 17, 2003

§115.148. Determination of Wastewater Characteristics.

The determination of the characteristics of a wastewater stream for purposes of this division (relating to Industrial Wastewater) shall be made as follows.

(1) The characteristics shall be determined at a location between the point of generation and before the wastewater stream is exposed to the atmosphere, treated for volatile organic compounds (VOC) removal, or mixed with another wastewater stream. For wastewater streams which, prior to November 15, 1993, were either actually being mixed or construction had commenced which would result in the wastewater streams being mixed, this mixing shall not establish a limit on where the characteristics may be determined.

(2) The flow rate of a wastewater stream shall be determined on the basis of an annual average by one of the following methods:

(A) the highest annual quantity of wastewater managed, based on historical records for the most recent five years of operation, or for the entire time the wastewater stream has existed if less than five years but at least one year;

(B) the maximum design capacity of the wastewater component;

(C) the maximum design capacity to generate wastewater of the process unit generating the wastewater stream;

(D) measurements that are representative of the actual, normal wastewater generation rates.

(3) The VOC concentration of a wastewater stream shall be determined on the basis of a flow-weighted annual average by one of the following methods, or by a combination of the methods. If the executive director determines that the VOC concentration cannot be adequately determined by knowledge of the wastewater, or by bench-scale or pilot-scale test data, the VOC concentration shall be determined in accordance with subparagraph (C) of this paragraph, or by a combination of the methods in subparagraphs (A), (B), and (C) of this paragraph. VOC with a Henry's Law Constant less than 7.5×10^{-5} atm-m^3/mole at 25 degrees Celsius shall not be included in the determination of VOC concentration.

(A) Knowledge of the wastewater. Sufficient information to document the VOC concentration. Examples of information include material balances, records of chemical purchases, or previous test results.

(B) Bench-scale or pilot-scale test data. Sufficient information to demonstrate that the bench-scale or pilot-scale test concentration data are representative of the actual VOC concentration.

(C) Measurements. Collect a minimum of three representative samples from the wastewater stream and determine the VOC concentration for each sample in accordance with §115.145 of this title (relating to Approved Test Methods). The VOC concentration of the wastewater stream shall be the flow-weighted average of the individual samples.

(4) The annual VOC loading in wastewater for a wastewater stream shall be the annual average flow rate determined in paragraph (2) of this section multiplied by the annual average VOC concentration determined in paragraph (3) of this section.

(5) The annual VOC loading in wastewater for a plant shall be the sum of the annual VOC loading in wastewater for each affected VOC wastewater stream.

Adopted October 27, 1999 Effective November 18 1999

§115.149. Counties and Compliance Schedules.

(a) The owner or operator of each affected source category within a plant in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties shall continue to comply with this division (relating to Industrial Wastewater) as required by §115.930 of this title (relating to Compliance Dates).

(b) The owner or operator of each affected source category within a plant in Ellis, Johnson, Kaufman, Parker, and Rockwall Counties shall comply with this division as soon as practicable, but no later than March 1, 2009.

Adopted November 15, 2006 Effective December 17, 1999

SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES
DIVISION 5: MUNICIPAL SOLID WASTE LANDFILLS
§§115.152, 115.153, 115.155 - 115.157, 115.159
Effective May 16, 2002

§115.152. Control Requirements.

(a) For the Houston/Galveston, El Paso, and Dallas/Fort Worth ozone nonattainment areas as defined in §115.10 of this title (relating to Definitions), no person shall operate or allow the operation of a municipal solid waste landfill (MSWLF) unless each owner or operator of a MSWLF calculates the nonmethane organic compounds (NMOC) emission rate for the landfill using the procedures provided in §60.753 of the proposed federal rules published in the May 30, 1991, issue of the *Federal Register* (58 FR 104). The volatile organic compound emission rate shall be calculated and recalculated annually using the following default values: Generation Rate Constant, K = 0.05 1/year; Generation Potential, L = 170 m^3/Mg; Non-methane Gas Concentration, C_{NMOC} = 4000 ppmv. If at any time the calculated NMOC emission rate exceeds 150 Megagrams (Mg) per year, the owner or operator shall:

(1) install a gas collection and control system (GCCS) subject to the requirements of §60.752(b)(2)(ii) of the proposed federal rules published in the May 30, 1991, issue of the *Federal Register* (58 FR 104). Alternative design methodologies to the GCCS are subject to the approval of the executive director;

(2) control NMOC gas emissions in one of the following ways:

(A) the total collected gas is routed to an open flare designed and operated in accordance with 40 CFR §60.18;

(B) the total collected gas is routed to a control device which reduces the total collected gas emissions by 98% or to less than 20 parts per million by volume; or

(C) the total collected gas is routed to a gas treatment system which processes the collected gas for subsequent use or sale. The sum of all emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of subparagraph (A) of this paragraph.

(3) operate the GCCS in compliance with §60.754 of the proposed federal rules published in the May 30, 1991, issue of the *Federal Register* (58 FR 104).

(b) The GCCS may be capped or removed if all of the following conditions are met:

(1) the landfill shall no longer accept waste and shall be permanently closed;

(2) the GCCS shall have been in continuous operation for at least 15 years; and

(3) the calculated NMOC emission rate shall be less than 150 Mg per year on three successive test dates. The test dates shall be no closer than three months apart, and no longer than six months apart.

Adopted May 4, 1994 Effective May 27, 1994

§115.153. Alternate Control Requirements.

For all persons in the Houston/Galveston, El Paso, and Dallas/Fort Worth ozone nonattainment areas, alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division (relating to Municipal Solid Waste Landfills) 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.

Adopted April 26, 2002 Effective May 16, 2002

§115.155. Approved Test Methods.

Compliance with §115.152 of this title (relating to Control Requirements) shall be determined by applying the following test methods, as appropriate:

(1) Test Methods 1-4 (40 CFR 60, Appendix A) for determining flow rate, oxygen concentration, or moisture, as necessary;

(2) Test Method 2E as proposed under 40 CFR 60, Appendix A, published in the May 30, 1991, issue of the *Federal Register* (58 FR 104) for designing the area of influence of the gas collection and control system (GCCS);

(3) Test Method 3C as proposed under 40 CFR 60, Appendix A, published in the May 30, 1991, issue of the *Federal Register* (58 FR 104) for measuring the concentration of nitrogen in the landfill gas;

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

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

(6) Test Method 25 (40 CFR 60, Appendix A) for determining total gaseous nonmethane (CH_4) organic emissions as carbon;

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

(8) Test Method 25C as proposed under 40 CFR 60, Appendix A, published in the May 30, 1991, issue of the *Federal Register* (58 FR 104) for determining non-CH_4 organic compounds in landfill gases;

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

(10) one of the above test methods with minor modifications as approved by the Executive Director.

Adopted May 4, 1994 Effective May 27, 1994

§115.156. Monitoring and Recordkeeping Requirements.

For the Houston/Galveston, El Paso, and Dallas/Fort Worth ozone nonattainment areas, the following recordkeeping requirements shall apply.

(1) For municipal solid waste landfills (MSWLF), which are not subject to the requirements of §115.152 of this title (relating to Control Requirements), the owner or operator of each landfill shall maintain complete and up-to-date records sufficient to demonstrate continuous compliance with the applicable exemption criteria including, but not limited to, an annual calculation of the non-methane organic compounds (NMOC) emissions rate and any other necessary operational information.

(2) For MSWLF, which are subject to the requirements of §115.152 of this title, the owner or operator of each landfill shall install and maintain monitors to continuously measure and record operational parameters of any emission control device installed to meet applicable control requirements. Such records must be sufficient to demonstrate proper functioning of those devices to design specifications, including but not limited to:

(A) the exhaust gas temperature immediately downstream for any direct-flame incinerator or enclosed flare;

(B) the gas temperature immediately upstream and downstream for any catalytic incinerator or chiller;

(C) the NMOC concentration for any carbon adsorption system exhaust gas to determine if breakthrough has occurred;

(D) the gas flowrate to the combustion device;

(E) monthly readings of the gauge pressure at each well in the gas collection header;

(F) the percent methane concentration at each well in the gas collection header; and

(G) the dates and reasons for any maintenance and repair of the required gas collection and control system and control devices and the estimated quantity and duration of NMOC emissions during such activities.

(3) Each owner or operator of a MSWLF shall annually submit an emissions inventory report as required by §101.10 of this title (relating to Emissions Inventory Requirements). This report shall include:

(A) calculation of the NMOC emission rate;

(B) a map or plot of the landfill, providing the size and location, and identifying all areas where waste may be landfilled according to the provisions of the permit;

(C) the maximum design capacity;

(D) notification of any increase in the size of the landfill. The increase may result from:

(i) an increase in the permitted area or depth of the landfill;

(ii) a change in the operating procedures; or

(iii) any other means which will increase the maximum design capacity of the landfill; and

(E) notification of closure.

(i) For purposes of this subchapter, closure means that waste is no longer being placed in the landfill, and no additional wastes will be placed in the landfill without filing a notification of modification, as prescribed by the commission.

(ii) Landfills that are closed permanently between reporting periods shall report as directed by §101.10 of this title and continue reporting until the calculated NMOC comission rate falls below 150 Mg per year on three successive test dates. The test dates shall be no closer than three months apart, and no longer that six months apart.

Adopted April 30, 1997 Effective May 22, 1997

§115.157. Exemptions.

For the Houston/Galveston, El Paso, and Dallas/Fort Worth ozone nonattainment areas, the following facilities are exempt:

(1) any municipal solid waste landfill (MSWLF) with a capacity of less than 100,000 Mg (111,000 tons);

(2) any MSWLF which closed or stopped receiving waste prior to November 8, 1987, and does not have the capacity to receive more waste.

Adopted May 4, 1994 Effective May 27, 1994

§115.159. Counties and Compliance Schedule.

(a) All affected municipal solid waste landfills (MSWLFs) in Collin, Dallas, Denton, and Tarrant Counties shall demonstrate compliance with this division (relating to Municipal Solid Waste Landfills) as soon as practicable, but no later than May 31, 1996.

(b) All affected MSWLFs in El Paso County shall demonstrate compliance with this division as soon as practicable, but no later than November 15, 1996.

(c) All affected MSWLFs in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall demonstrate 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).

Adopted April 26, 2002 Effective May 16, 2002

SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES
DIVISION 6: BATCH PROCESSES
§§115.160 - 115.167, 115.169
Effective October 20, 2005

§115.160. Batch Process Definitions.

The following words and terms, when used in this division (relating to Batch Processes), shall have the following meanings, unless the context clearly indicates otherwise. Additional definitions for terms used in this division are found in §§3.2, 101.1, and 115.10 of this title (relating to Definitions).

(1) **Aggregated**--The summation of all process vents containing volatile organic compounds (VOC) within a process.

(2) **Annual mass emissions total**--The sum of all VOC emissions (pounds per year), evaluated before control but after the last recovery device, from a process vent. Annual mass emissions shall be calculated from an individual process vent or groups of process vents by using emission estimation equations contained in Chapter 3 of EPA's Control of Volatile Organic Compound Emissions from Batch Processes-Alternative Control Techniques Information Document (EPA-453/R-94-020, February 1994) and then multiplying by the historical duration and frequency of the emission or groups of emissions over the course of a year. For process vents that are included in a new source review air permit, standard permit, or permit by rule registered by Form PI-8, the annual mass emissions total shall be based on the maximum allowable emission rate (MAER) levels in the permit or Form PI-8 (adjusted to represent the level before control, but after the last recovery device), whether they correspond to the maximum design production potential or to the actual annual production estimate.

(3) **Average flow rate**--The flow rate in standard cubic feet per minute (scfm) averaged over the amount of time that VOCs are emitted during an emission event. For the evaluation of average flow rate from an aggregate of sources, the average flow rate is the weighted average of the average flow rates of the emission events and their annual venting time, or:

Figure: 30 TAC §115.160(3)

$$\text{Average flow rate} = \frac{\Sigma(F)(D)}{\Sigma D}$$

where:

F = Average flow rate per emission event

D = Annual duration of emission event

(4) **Batch**--A noncontinuous process involving the bulk movement of material through sequential manufacturing steps. Mass, temperature, concentration, and other properties of a system vary with time. Batch processes are not characterized by steady-state conditions. Reactants are not added and products are not removed simultaneously.

(5) **Batch cycle**--A manufacturing event of an intermediate or product from start to finish in a batch process.

(6) **Batch process (for the purpose of determining reasonably available control technology (RACT) applicability)**--The batch equipment assembled and connected by pipes, or otherwise operated in a sequence of steps, to manufacture a product in a batch fashion.

(7) **Batch process train**--An equipment train that is used to produce a product or intermediates in batch fashion. A typical equipment train consists of equipment used for the synthesis, mixing, and purification of a material.

(8) **Emissions before control**--The emissions total before the application of a control device but after the last recovery device, or the emissions total if no control device is used. The emissions total may not be reduced to account for discharge of VOC into wastewater if the wastewater is further handled or processed with the potential for VOC emissions to the atmosphere.

(9) **Primary fuel**--The fuel that provides the principal heat input to a device. To be considered a primary fuel, the fuel must be able to sustain operation without the addition of other fuels.

(10) **Process vent**--A vent gas stream that is discharged from a batch process. Process vents include gas streams that are discharged directly to the atmosphere or are discharged to the atmosphere after diversion through a recovery device. Process vents exclude relief valve discharges, leaks from equipment, vents from storage tanks, vents from transfer/loading operations, and vents from wastewater. Process gaseous streams that are used as primary fuels are also excluded. The lines that transfer such fuels to a plant fuel gas system are not considered to be vents.

(11) **RACT**--Reasonably available control technology.

(12) **Recovery device**--An individual unit of equipment capable of and used for recovering chemicals for use, reuse, or sale. Recovery devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.

(13) **Unit operations**--Those discrete processing steps that occur within distinct equipment that are used to prepare reactants, facilitate reactions, separate and purify products, and recycle materials.

(14) **Volatility**--As follows.

(A) Low volatility VOCs are those which have a vapor pressure less than or equal to 75 millimeters of mercury (mm Hg) at 20 degrees Celsius.

(B) Moderate volatility VOCs are those which have a vapor pressure greater than 75 and less than or equal to 150 mm Hg at 20 degrees Celsius.

(C) High volatility VOCs are those which have a vapor pressure greater than 150 mm Hg at 20 degrees Celsius.

(D) To evaluate VOC volatility for single unit operations that service numerous VOCs or for processes handling multiple VOCs, the weighted average volatility can be calculated from the total amount of each VOC emitted in a year and the individual component vapor pressure, as follows.

Figure: 30 TAC §115.160(14)(D)

$$\text{Weighted average volatility} = \frac{\Sigma Vp_i \times (M_i / MW_i)}{\Sigma (M_i / MW_i)}$$

where:

Vp_i = Vapor pressure of VOC component i
M_i = Mass of VOC component i
MW_i = Molecular weight of VOC component i

Adopted December 13, 2002 Effective January 17, 2003

§115.161. Applicability.

(a) The provisions of §§115.162 - 115.167 of this title (relating to Control Requirements; Alternate Control Requirements; Determination of Emissions and Flow Rates; Approved Test Methods and Testing Requirements; Monitoring and Recordkeeping Requirements; and Exemptions) apply to vent gas streams at batch

process operations in the Beaumont/Port Arthur and Houston/Galveston areas, as defined in §115.10 of this title (relating to Definitions), under the following Standard Industrial Classification (SIC) codes:

(1) 2821 (plastic resins and materials);

(2) 2833 (medicinals and botanicals);

(3) 2834 (pharmaceutical preparations);

(4) 2861 (gum and wood chemicals);

(5) 2865 (cyclic crudes and intermediates);

(6) 2869 (industrial organic chemicals, not elsewhere classified); and

(7) 2879 (agricultural chemicals, not elsewhere classified).

(b) Any batch process operation that is exempt under §115.167(1) or (2)(A) of this title is subject to the requirements of Division 2 of this subchapter (relating to Vent Gas Control).

(c) Any batch process in the Houston/Galveston area in which a highly-reactive volatile organic compound, as defined in §115.10 of this title, is a raw material, intermediate, final product, or in a waste stream is subject to the requirements of Subchapter H of this chapter (relating to Highly-Reactive Volatile Organic Compounds) in addition to the applicable requirements of either this division (relating to Batch Processes) or Division 2 of this subchapter, whichever of these two divisions applies.

Adopted December 13, 2002 Effective January 17, 2003

§115.162. Control Requirements.

The owner or operator of each batch process operation in the Beaumont/Port Arthur and Houston/Galveston areas shall comply with the following control requirements.

(1) Reasonable available control technology (RACT) equations. The volatile organic compounds (VOC) mass emission rate from individual process vents or for process vent streams in aggregate within a batch process shall be reduced by 90% if the actual average flow rate value (in standard cubic feet per minute (scfm)) is below the flow rate (FR) value calculated using the applicable RACT equation for the volatility range (low, moderate, or high) of the material being emitted when the annual mass

emission total (AE, in pounds per year) are input. The RACT equations, specific to volatility, are as follows:

(A) Low volatility: FR = 0.07(AE) - 1821;

(B) Moderate volatility: FR = 0.031(AE) - 494;

(C) High volatility: FR = 0.013(AE) - 301.

(2) Successive ranking scheme. For aggregate streams within a process, the control requirements must be evaluated with the following successive ranking scheme until control of a segment of unit operations is required or until all unit operations have been eliminated from the process pool.

(A) If, for the process vent streams in aggregate, the value of FR calculated using the applicable RACT equation in paragraph (1) of this section is negative (i.e., less than zero), then the process is exempt from the 90% control requirements, and the successive ranking scheme of subparagraph (F) of this paragraph does not apply. This would occur if the mass annual emission rates are below the lower limits specified in §115.167(2)(A) of this title (relating to Exemptions).

(B) If, for the process vent streams in aggregate, the actual average flow rate value (in scfm) is below the value of FR calculated using the applicable RACT equation in paragraph (1) of this section, then the overall emissions from the batch process must be reduced by 90%, and the successive ranking scheme of subparagraph (F) of this paragraph does not apply. The owner or operator has the option of selecting which unit operations are to be controlled and to what levels, provided that the overall control meets the specified level of 90%. Single units that qualify for exemption under §115.167(2)(B) of this title do not have to be controlled even if all units should qualify for this exemption.

(C) If, for the process vent streams in aggregate, the actual average flow rate value (in scfm) is greater than the value of FR calculated using the applicable RACT equation in paragraph (1) of this section (and the calculated value of FR is a positive number), then the control requirements must be evaluated with the successive ranking scheme of subparagraph (F) of this paragraph until control of a segment of unit operations is required or until all unit operations have been eliminated from the process pool. Single units that qualify for exemption under §115.167(2)(B) of this title do not have to be included in the rankings and do not have to be controlled.

(D) Sources that are required to be controlled to the level specified by RACT (i.e., 90%) will have an average flow rate that is below the flow rate specified by the applicable RACT equation in paragraph (1) of this section (when the source's annual emission total is input). The applicability criterion is implemented on a two-tier

basis. First, single pieces of batch equipment corresponding to distinct unit operations shall be evaluated over the course of an entire year, regardless of what materials are handled or what products are manufactured in them. Second, equipment shall be evaluated as an aggregate if it can be linked together based on the definition of a process.

(E) To determine applicability of a RACT option in the aggregation scenario, all the VOC emissions from a single process shall be summed to obtain the annual mass emission total, and the weighted average flow rate from each process vent in the aggregation shall be used as the average flow rate.

(F) All unit operations in the batch process, as defined for the purpose of determining RACT applicability, shall be ranked in ascending order according to their ratio of annual emissions (pounds per year) divided by average flow rate (in scfm). Sources with the smallest ratios shall be listed first. This list of sources constitutes the "pool" of sources within a batch process. The annual emission total and average flow rate of the pool of sources shall then be compared against the RACT equations in paragraph (1) of this section to determine whether control of the pool is required.

(i) If control is not required after the initial ranking, unit operations having the lowest annual emissions/average flow rate ratio shall then be eliminated one by one, and the characteristics of annual emission and average flow rate for the remaining pool of equipment must be evaluated with each successive elimination of a source from the pool.

(ii) Control of the unit operations remaining in the pool to the specified level (i.e., 90%) shall be required once the aggregated characteristics of annual emissions and average flow rate have met the specified cutoffs. The owner or operator has the option of selecting which unit operations are to be controlled and to what levels, provided that the overall control meets the specified level of 90%.

(3) Once-in, always-in. Any batch process operation that becomes subject to the provisions of this division by exceeding provisions of §115.167 of this title will remain subject to the provision of this division, even if throughput or emissions later fall below exemption limits, unless and until emissions are reduced to no more than the controlled emissions level existing before implementation of the project by which throughput or emission rate was reduced to less than the applicable exemption limits in §115.167 of this title; and

(A) the project by which throughput or emission rate was reduced is authorized by any permit or permit amendment or standard permit or permit by rule required by Chapter 116 or Chapter 106 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification; and Permits by Rule). If a permit by

rule is available for the project, compliance with this division must be maintained for 30 days after the filing of documentation of compliance with that permit by rule; or

(B) if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner/operator has given the executive director 30 days' notice of the project in writing.

Adopted December 6, 2000 Effective January 18, 2001

§115.163. Alternate Control Requirements.

Alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division (relating to Batch Processes) 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.

Adopted October 27, 1999 Effective November 18, 1999

§115.164. Determination of Emissions and Flow Rates.

The owner or operator of each batch process operation in the Beaumont/Port Arthur and Houston/Galveston areas shall determine the mass emissions and flow rates as follows.

(1) Determination of Uncontrolled Annual Emission Total. The owner or operator shall determine the annual mass emissions total by using engineering estimates of the uncontrolled emissions from a process vent or group of process vents within a batch process train and multiplying by the potential or permitted number of batch cycles per year. Engineering estimates must follow the guidance contained in EPA's *Control of Volatile Organic Compound Emissions from Batch Processes - Alternative Control Techniques Information Document* (EPA-453/R-94-020, February 1994). Alternatively, if an emissions measurement is used to measure vent emissions, the measurement must conform with the requirements of measuring incoming mass flow rate of volatile organic compounds as specified in §115.165 of this title (relating to Approved Test Methods and Testing Requirements).

(2) Determination of Average Flow Rate. To obtain a value for average flow rate, the owner or operator may choose to measure the flow rates or to estimate the flow rates using the estimation methods contained in EPA's *Control of Volatile Organic Compound Emissions from Batch Processes - Alternative Control Techniques Information Document* (EPA-453/R-94-020, February 1994). For existing manifolds, the average flow rate may be the flow rate that was assumed in the design.

Adopted December 6, 2000 Effective January 18, 2001

§115.165. Approved Test Methods and Testing Requirements.

The owner or operator of each batch process operation in the Beaumont/Port Arthur and Houston/Galveston areas shall comply with the following.

(1) Performance testing conditions. For the purpose of determining compliance with the control requirements of this division (relating to Batch Processes), the process unit shall be run at a scenario that represents maximum batch rates (e.g., three batches per day, 1,000 lbs per batch, etc.) during any performance test.

(2) Test methods. The owner or operator of each batch process operation shall use the following methods to determine compliance with the percent reduction efficiency requirement of §115.162 of this title (relating to Control Requirements).

(A) Flow rate.

(i) Test Methods 1 or 1A (40 Code of Federal Regulations (CFR) 60, Appendix A) as appropriate, shall be used for selection of the sampling sites if the flow rate measuring device is a rotameter. No traverse is necessary when the flow measuring device is an ultrasonic probe. The control device inlet sampling sites for determination of vent stream volatile organic compounds (VOC) composition reduction efficiency shall be before the control device and after the control device.

(ii) Test Methods 2, 2A, 2C, or 2D (40 CFR 60, Appendix A) as appropriate, shall be used for determination of gas stream volumetric flow rate. Flow rate measurements shall be made continuously.

(B) Concentration of VOC. Test Method 18 (40 CFR 60, Appendix A) (gas chromatography) or Test Method 25A (40 CFR 60, Appendix A) (flame ionization) shall be used to determine the concentration of VOC in the control device inlet and outlet.

(i) The sampling time for each run shall be the entire length of the batch cycle, during which readings shall be taken:

(I) continuously if Method 25A is used; or

(II) as often as is possible using Method 18, with a maximum of one-minute intervals between measurements throughout the batch cycle.

(ii) The emission rate of the process vent or inlet to the control device shall be determined by combining continuous concentration and flow rate measurements at simultaneous points throughout the batch cycle.

(iii) The mass flow rate of the control device outlet shall be determined by combining continuous concentration and flow rate measurements at simultaneous points throughout the batch cycle.

(iv) The efficiency of the control device shall be determined by integrating the mass flow rates obtained in clauses (ii) and (iii) of this subparagraph over the time of the batch cycle, and dividing the difference in inlet and outlet mass flow totals by the inlet mass flow total.

(C) Performance requirements for flares and vapor combustors.

(i) For flares, the performance test requirements of 40 CFR 60.18(b) shall apply.

(ii) For vapor combustors, the owner or operator may consider the unit to be a flare and meet the performance test requirements of 40 CFR 60.18(b).

(iii) Compliance with the requirements of 40 CFR 60.18(b) will be considered to represent 98% control of the VOC in the flare inlet.

(D) Minor modifications. Minor modifications to these test methods may be used, if approved by the executive director.

(E) Alternate test methods. Test methods other than those specified in subparagraphs (B) and (C) of this paragraph may be used if validated by 40 CFR 63, Appendix A, Test Method 301 (effective December 29, 1992). For the purposes of this paragraph, substitute "executive director" each place that Test Method 301 references Aadministrator.

Adopted December 6, 2000 Effective January 18, 2001

§115.166. Monitoring and Recordkeeping Requirements.

The owner or operator of each batch process operation in the Beaumont/Port Arthur and Houston/Galveston areas shall maintain the following information for at least five years at the plant, as defined by its air quality account number, except that the five-year record retention requirement does not apply to records generated before December 31, 2000. The owner or operator shall make the information available upon

request to representatives of the executive director, EPA, or any local air pollution control agency having jurisdiction in the area:

(1) Vapor control systems. For vapor control systems used to control emissions from batch process operations, records of appropriate parameters to demonstrate compliance, including:

(A) continuous monitoring and recording of:

(i) for a direct-flame incinerator, the exhaust gas temperature in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange. The temperature monitoring device shall have an accuracy of ∀0.5 degrees Celsius, or alternatively, ±1.0%;

(ii) for a catalytic incinerator, the exhaust gas temperature immediately before and after the catalyst bed. The temperature monitoring device shall have an accuracy of ±0.5 degrees Celsius, or alternatively, ±1.0%;

(iii) for an absorber, either:

(I) the scrubbing liquid temperature. The temperature monitoring device shall have an accuracy of ±1.0% of the temperature being monitored in degrees Celsius, or alternatively, ±0.02 specific gravity unit; or

(II) the concentration level of volatile organic compounds (VOC) exiting the recovery device based on a detection principle such as infrared, photoionization, or thermal conductivity;

(iv) for a condenser or refrigeration system, either:

(I) the condenser exit temperature. The temperature monitoring device shall have an accuracy of ±1.0% of the temperature being monitored in degrees Celsius, or alternatively, ±0.5 degrees Celsius; or

(II) the concentration level of VOC exiting the recovery device based on a detection principle such as infrared, photoionization, or thermal conductivity;

(v) for a carbon adsorption system, as defined in §101.1 of this title (relating to Definitions), either:

(I) steam flow (using an integrating steam flow monitoring device) and the carbon bed temperature. The steam flow monitor shall have an accuracy of ±10%. The temperature monitor shall have an accuracy of ±1.0% of the

temperature being monitored in degrees Celsius, or ±0.5 degrees Celsius, whichever is greater; or

(II) the concentration level of VOC exiting the recovery device based on a detection principle such as infrared, photoionization, or thermal conductivity;

(vi) for a pressure swing adsorption unit that is the final recovery device, the temperature of the bed near the inlet and near the outlet. The temperature monitoring device shall have an accuracy of ±1.0% of the temperature being monitored in degrees Celsius, or ±0.5 degrees Celsius; and

(vii) for a vapor combustor, the exhaust gas temperature in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange. The temperature monitoring device shall have an accuracy of ±0.5 degrees Celsius, or alternatively, ±1.0%. Alternatively, the owner or operator of a vapor combustor may consider the unit to be a flare and meet the requirements of subparagraph (B) of this paragraph;

(B) for flares, the requirements specified in 40 Code of Federal Regulations §60.18(b) and Chapter 111 of this title (relating to Control of Air Pollution from Visible Emissions and Particulate Matter); and

(C) for vapor control systems other than those specified in subparagraphs (A) and (B) of this paragraph, records of appropriate operating parameters.

(2) Process vents. A record of the following emission stream parameters for each process vent contained in the batch process:

(A) the annual mass emission total and documentation verifying these values. If emission estimate equations are used, the documentation shall be the calculations coupled with the expected or permitted (if available) number of emission events per year; and

(B) the average flow rate in standard cubic feet per minute and documentation verifying these values.

(3) Performance test monitoring parameters. Records of the following parameters required to be measured during a performance test required under §115.165 of this title (relating to Approved Test Methods and Testing Requirements) and required to be monitored under paragraph (1) of this section:

(A) where an owner or operator seeks to demonstrate compliance with §115.162 of this title (relating to Control Requirements) through use of either a direct-flame or catalytic incinerator, the average firebox temperature of the incinerator (or the average temperature upstream and downstream of the catalyst bed for a catalytic incinerator), measured continuously and averaged over the same time period as the performance test;

(B) where an owner or operator seeks to demonstrate compliance with §115.162 of this title through use of a smokeless flare, the flare design (i.e., steam-assisted, air-assisted, or nonassisted), all visible emissions readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the performance test; continuous flare pilot flame monitoring; and all periods of operations during which the pilot flame is absent; and

(C) where an owner or operator seeks to demonstrate compliance with §115.162 of this title:

(i) with an absorber as the final control device, the exit specific gravity (or alternative parameter which is a measure of the degree of absorbing liquid saturation, if approved by the executive director) and average exit temperature of the absorbing liquid measured continuously and averaged over the same time period as the performance test (both measured while the vent stream is routed normally);

(ii) with a condenser as the control device, the average exit (product side) temperature measured continuously and averaged over the same time period as the performance test while the vent stream is routed normally;

(iii) with a carbon adsorption system as the control device, the total steam mass flow measured continuously and averaged over the same time period as the performance test (full carbon bed cycle), temperature of the carbon bed after regeneration (and within 15 minutes of completion of any cooling cycle(s)), and duration of the carbon bed steaming cycle (all measured while the vent stream is routed normally);

(iv) the concentration level or reading indicated by an organic monitoring device at the outlet of the absorber, condenser, or carbon adsorption system, measured continuously and averaged over the same time period as the performance test while the vent stream is routed normally; and

(v) with a pressure swing adsorption unit as the final recovery device, the temperature of the bed near the inlet and near the outlet. The temperature monitoring device shall have an accuracy of ±1.0% of the temperature being monitored in degrees Celsius, or ±0.5 degrees Celsius.

Adopted December 13, 2002 Effective January 17, 2003

§115.167. Exemptions.

The following exemptions apply.

(1) Batch process operations at an account that has total volatile organic compound (VOC) emissions (determined before control but after the last recovery device) of less than the following rates from all stationary emission sources included in the account are exempt from the requirements of this division (relating to Batch Processes), except for §115.161(b) and (c) of this title (relating to Applicability):

(A) 50 tons per year (tpy) in the Beaumont-Port Arthur area; and

(B) 25 tpy in the Houston-Galveston-Brazoria area.

(2) The following are exempt from the requirements of this division, except for §§115.161(b) and (c), 115.164, and 115.166(2) and (3) of this title (relating to Applicability; Determination of Emissions and Flow Rates; and Monitoring and Recordkeeping Requirements).

(A) Combined vents from a batch process train that have the following annual mass emissions total.

Figure: 30 TAC §115.167(2)(A)

Volatility Range	Lower Limit of Annual Mass Emissions Total in pounds per year (lb/yr)
Low	26,014
Moderate	15,935
High	23,154

(B) Single unit operations that have an annual mass emissions total of 500 pounds per year or less.

Adopted September 28, 2005 Effective October 20, 2005

§115.169. Counties and Compliance Schedules.

(a) The owner or operator of each batch process operation in Hardin, Jefferson, and Orange Counties at an account that has total volatile organic compound (VOC) emissions (determined before control but after the last recovery device) of 100 tons per year or more shall continue to comply with this division (relating to Batch Processes) as required by §115.930 of this title (relating to Compliance Dates).

(b) The owner or operator of each batch process operation in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall demonstrate compliance with this division as soon as practicable, but no later than December 31, 2002. All batch process operations subject to this division in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties must continue to comply with the requirements of Division 2 of this subchapter (relating to Vent Gas Control) until these batch process operations are in compliance with the requirements of this division.

(c) The owner or operator of each batch process operation in Hardin, Jefferson, and Orange Counties at an account that has total VOC emissions (determined before control but after the last recovery device) of 50 tons per year or more but less than 100 tons per year shall demonstrate compliance with this division as soon as practicable, but no later than December 31, 2006. All batch process operations subject to this division in Hardin, Jefferson, and Orange Counties must continue to comply with the requirements of Division 2 of this subchapter until these batch process operations are in compliance with the requirements of this division.

Adopted September 28, 2005 Effective October 20, 2005