

**SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES**  
**DIVISION 1: STORAGE OF VOLATILE ORGANIC COMPOUNDS**  
**§§115.110, 115.112 - 115.117, 115.119**

§115.110. Definitions.	Comments on June 14, 2007 revisions
<p>The following words and terms, when used in this division (relating to Storage of Volatile Organic Compounds), 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).</p> <p>(1) <b>Deck cover</b>--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).</p> <p>(2) <b>Flexible enclosure system</b>--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.</p> <p>(3) <b>Incompatible liquid</b>--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.</p> <p>(4) <b>Internal sleeve emission control system</b>--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.</p> <p>(5) <b>Pipeline breakout station</b>--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.</p> <p>(6) <b>Pole float</b>--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.</p> <p>(7) <b>Pole sleeve</b>--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 extends into the stored liquid.</p> <p>(8) <b>Pole wiper</b>--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.</p> <p>(9) <b>Slotted guidepole</b>--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.</p> <p>(10) <b>Tank battery</b>--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.</p>	<p><b>This is a new section with definitions that are specific to this Division. Most of these definitions pertain to slotted guidepoles, and are taken from EPA's STERPP agreement and from Part 63 Subpart WW.</b></p>

**Summary of TCEQ Reg V Requirements for Storage Tanks  
In the Houston/Galveston/Brazoria area**

prepared by Rob Ferry, TGB – July 10, 2007

§115.112. Control Requirements.	Although all of subsection (d) is new, only the portions that differ from subsection (a) are highlighted.	Comments on June 14, 2007 revisions
(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and <a href="#">until January 1, 2009, in the Houston/Galveston/Brazoria</a> areas as defined in §115.10 of this title (relating to Definitions), the following requirements apply.	(d) For all persons in the <a href="#">Houston/Galveston/Brazoria</a> area the following requirements apply <a href="#">beginning January 1, 2009</a> .	<b>Brazoria added to the Houston/Galveston area. Requirements will change in the H/G/B area effective January 1, 2009 {delay until 1/1/2017 allowed if tank must be emptied &amp; degassed to achieve compliance, per §115.119(c)}. Only other changes to 115.112(a) is to change ‘shall’ to ‘must’.</b>
(1) No person shall place, store, or hold in any stationary tank, reservoir, or other container any volatile organic compound (VOC) unless such container is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere, or is equipped with at least the control device specified in Table I(a) <a href="#">of this paragraph</a> for VOC other than crude oil and condensate, or Table II(a) <a href="#">of this paragraph</a> for crude oil and condensate.	(1) No person shall place, store, or hold in any stationary tank, reservoir, or other container any VOC unless such container is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere, or is equipped with at least the control device 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.	<b>Capacity and vapor pressure cutoffs remain the same (i.e., no changes to the tables).</b>  <b>Other comments below pertain to what is new for the H/G/B area as of January 1, 2009.</b>
(2) For floating roof storage tanks subject to the provisions of paragraph (1) of this subsection, the following requirements apply.	(2) For floating roof storage tanks subject to the provisions of paragraph (1) of this subsection, the following requirements apply.	
(A) All openings in an internal or external floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents must provide a projection below the liquid surface <b>or</b> 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.	(A) All openings in an internal floating cover or external floating roof <a href="#">as defined in §115.10 of this title (relating to Definitions)</a> except for automatic bleeder vents (vacuum breaker vents), and rim space vents must provide a projection below the liquid surface. <a href="#">All openings in an internal floating cover 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.</a>	<b>A domed external floating-roof tank is, by definition in §115.10, an internal floating-roof tank for purposes of rule compliance (this is a clarification, rather than a change).</b> <b>Removes the loophole for not requiring a cover over deck openings,</b> <b>Adds a requirement for deck fitting covers to be gasketed.</b> <b>The “no visible gap” clause is replaced with a gap limit of 1/8 inch.</b>
(B) Automatic bleeder vents (vacuum breaker vents) <b>must</b> 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, <b>must</b> be set to open only when the roof is being floated off the roof leg supports or at	(B) Automatic bleeder vents (vacuum breaker vents) <a href="#">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</a>	<b>Floating roof vents also need to be gasketed. More general language for when a vent is allowed to be open is extended to vacuum breaker vents, as well as rim vents.</b>

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the manufacturer's recommended setting.	accordance with the manufacturer's design.	
	(C) Each opening into the internal floating cover for a fixed roof support column may be equipped with a flexible fabric sleeve seal instead of a deck cover.	<b>An alternative type of deck fitting cover is allowed for the openings for fixed-roof support columns.</b>
(D) Any roof drain that empties into the stored liquid <b>must</b> be equipped with a slotted membrane fabric cover that covers at least 90% of the area of the opening.	(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 <b>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 internal floating roof tanks are not subject to this requirement.</b>	<b>Allows for alternatives in control of roof drains. Clarifies that stub drains on IFRs are not subject to control.</b>
(E) There <b>must</b> be no visible holes, tears, or other openings in any seal or seal fabric.	(E) There must be no visible holes, tears, or other openings in any seal or seal fabric.	
(F) For external floating roof storage tanks, secondary seals <b>must</b> be the rim-mounted type (the seal <b>must</b> be continuous from the floating roof to the tank wall). The accumulated area of gaps that exceed 1/8 inch (0.32 centimeter) in width between the secondary seal and tank wall <b>must</b> be no greater than 1.0 square inch per foot (21 square centimeters per meter) of tank diameter.	(F) For external floating roof storage tanks, secondary seals must be the rim-mounted type (the seal must be continuous from the floating roof to the tank wall <b>with the exception of gaps that do not exceed the following specification</b> ). The accumulated area of gaps that exceed 1/8 inch (0.32 centimeter) in width between the secondary seal and tank wall must be no greater than 1.0 square inch per foot (21 square centimeters per meter) of tank diameter.	<b>Adds clarifying language.</b>
	(G) Each opening for a slotted guidepole in an external floating roof tank must be equipped with one of the control device configurations specified in clauses (i) - (vi) of this subparagraph.  (i) A pole wiper and a pole float. The wiper or seal of the pole float must be 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) Retrofit to a solid guidepole system. (v) A flexible enclosure system. (vi) A cover on an external floating roof tank	<b>Adds requirements for slotted guidepoles. Any of the STERPP control options are acceptable, including the sleeve without a float.</b>
	(H) The floating roof must be floating on the liquid surface at all times except when the floating roof is supported	<b>Specifies restrictions on floating roof landings.</b>

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	<p>by the leg supports or other support devices (e.g., hangers from the fixed roof) during the initial fill (including refill after the tank has been degassed and cleaned in accordance with §§115.541 – 115.547 of this title (relating to Degassing or Cleaning of Stationary, Marine, and Transport Vessels) or as allowed under the following circumstances:</p> <ul style="list-style-type: none"> <li>(i) when necessary for maintenance or inspection;</li> <li>(ii) when necessary for supporting a change in service to an incompatible liquid);</li> <li>(iii) when the storage tank has a capacity of less than 25,000 gallons or the vapor pressure of the material stored is less than 1.5 psia;</li> <li>(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;</li> <li>(v) when all 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</li> <li>(vi) when all 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.</li> </ul>	
(3) Vapor recovery systems used as a control device on any stationary tank, reservoir, or other container <b>must</b> maintain a minimum control efficiency of 90%.	(3) Vapor recovery systems used as a control device on any stationary tank, reservoir, or other container must maintain a minimum control efficiency of 90%.	
	(4) Storage tanks storing condensate prior to custody transfer must route flashed gases to a vapor recovery system or control device 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.	<b>Adds requirements to control flashed gases from condensate tanks prior to custody transfer (with an exemption added at §115.117(a)(9) for such tanks if the uncontrolled VOC emissions from the tank or tank battery are &lt; 25 tpy).</b>
	(5) Storage tanks storing crude oil or condensate prior to custody transfer or at a pipeline breakout station must route flashed gases to a vapor recovery system or control device if the uncontrolled VOC emissions from an individual storage	<b>Adds requirements to control flashed gases from crude oil and condensate tanks prior to custody transfer and at pipeline breakout stations.</b>

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	<p>tank, or from the aggregate of tanks in a tank battery, have the potential to 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:</p>	
	<p>(A) direct measurement using the measuring instruments and methods specified in §115.115 of this title (relating to Approved Test Methods);</p>	
	<p>(B) using 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;</p>	
	<p>(C) for crude oil storage only, using the chart in Exhibit 2 of the United States Environmental Protection Agency publication <i>Lessons Learned from Natural Gas STAR Partners: Installing Vapor Recovery Units on Crude Oil Storage Tanks</i>, October 2003, and assuming that the hydrocarbon vapors have a molecular weight of 34 pounds per pound mole and are 48% by weight VOC; or</p>	
	<p>(D) other test method or computer simulation approved by the executive director.</p>	
<p>(b) For all persons in Gregg, Nueces, and Victoria Counties, the following requirements shall apply:</p>		<p><b>No changes for these counties.</b></p>
<p>*****</p>		
<p>(c) For all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, the following requirements shall apply.</p>		<p><b>No changes for these counties.</b></p>
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§115.113. Alternative Control Requirements.	Comments on June 14, 2007 revisions
<p>Alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division (relating to Storage of Volatile Organic Compounds) 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.</p>	<p><b>Only change is to add a clarifying parenthetical statement.</b></p>
§115.114. Inspection Requirements.	Comments on June 14, 2007 revisions
<p>(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/Brazoria areas, the following inspection requirements apply.</p>	<p><b>Only changes are adding Brazoria to Houston/Galveston, and . .</b></p>
<p>(1) For internal floating roof storage tanks, the internal floating roof and the primary seal or the secondary seal (if one is in service) <b>must</b> be visually inspected through a fixed roof inspection hatch at least once every 12 months. 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 §§115.541 - 115.547 of this title (relating to Degassing or Cleaning of Stationary, Marine, and Transport Vessels). 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 <b>must</b> 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.</p>	<p><b>changing ‘shall’ to ‘must’, and . .</b></p>
<p>(2) For external floating roof storage tanks, the secondary seal gap <b>must</b> be physically measured at least once every 12 months to insure compliance with §115.112(a)(2)(F) <b>and §115.112(d)(2)(F)</b> of this title (relating to Control Requirements). If the secondary seal gap exceeds the limitations specified by §115.112(a)(2)(F) <b>or §115.112(d)(2)(F)</b> 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 §§115.541 - 115.547 of this title. 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 <b>must</b> 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.</p>	<p><b>adding references to the new section (d).</b></p>
<p>(3) If the tank is equipped with a mechanical shoe or liquid-mounted primary seal, compliance with §115.112(a)(2)(F) <b>and §115.112(d)(2)(F)</b> of this title can be determined by visual inspection.</p>	
<p>(4) For external floating roof storage tanks, the secondary seal <b>must</b> be visually inspected at least once every six months to ensure compliance with §115.112(a)(2)(E) and (F) <b>and §115.112(d)(2)(E) and (F)</b> of this title. 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</p>	

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§115.114. Inspection Requirements.	Comments on June 14, 2007 revisions
<p>repair the items or shall empty and degas the storage tank in accordance with §§115.541 - 115.547 of this title. 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 <b>must</b> 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</p>	
<p>(b) For all persons in Gregg, Nueces, and Victoria Counties, the following inspection requirements shall apply. * * * * *</p>	<p><b>No changes for these counties.</b></p>
<p>(c) For all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, the following inspection requirements shall apply. * * * * *</p>	<p><b>No changes for these counties.</b></p>
§115.115. Approved Test Methods.	Comments on June 14, 2007 revisions
<p>(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/<b>Brazoria</b> areas, compliance with §115.112(a) <b>and (d)</b> of this title (relating to Control Requirements) <b>must</b> be determined by applying the following test methods, as appropriate: * * * * *</p>	<p><b>Changes are only editorial.</b></p>
<p>(b) For Gregg, Nueces, and Victoria Counties, compliance with §115.112(b) of this title shall be determined by applying the following test methods, as appropriate: * * * * *</p>	<p><b>No changes for these counties.</b></p>
<p>(c) For the Houston/Galveston/Brazoria area, compliance with §115.112(d)(5) of this title may be determined by using the following measurement instruments or applying the following test methods, as appropriate:</p>	<p><b>This is a new section for the test methods to be used in determining emissions of flashed gases from storage tanks.</b></p>
<p>(1) mass flow meter, positive displacement meter, or similar device over a 24-hour period representative of normal operation for flow measurements of flash gases. For crude oil and natural gas production sites, the flow measurements must be made while the producing wells are operational; and</p>	
<p>(2) test methods referenced in subsection (a)(2), (4), and (5) 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 VOC in the flashed gases; or</p>	
<p>(3) minor modifications to these test methods approved by the executive director.</p>	
§115.116. Monitoring and Recordkeeping Requirements.	Comments on June 14, 2007 revisions
<p>(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/<b>Brazoria</b> areas, the following recordkeeping requirements apply.</p>	<p><b>Changes are only editorial, including . .</b></p>
<p>(1) The owner or operator of any storage vessel with an external floating roof <b>that</b> is exempted from the requirement for a</p>	

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§115.116. Monitoring and Recordkeeping Requirements.	Comments on June 14, 2007 revisions
<p>secondary seal as specified in §115.117(a)(1), (6), and (7) of this title (relating to Exemptions) and <b>is</b> used to store volatile organic compounds (VOC) with a true vapor pressure greater than 1.0 pounds per square inch absolute (psia) (6.9 kilo Pascals (kPa)) at storage conditions shall maintain records of the type of VOC stored and the average monthly true vapor pressure of the stored liquid.</p>	
<p>(2) The results of inspections required by §115.114(a) of this title (relating to Inspection Requirements) <b>must</b> be recorded. For secondary seal gaps that are required to be physically measured during inspection, these records <b>must</b> include a calculation of emissions for all secondary seal gaps that exceed 1/8 inch (0.32 centimeter) where the accumulated area of such gaps is greater than 1.0 square inch per foot (21 square centimeters per meter) of tank diameter. These calculated <b>emissions inventory reportable</b> emissions (Tr) <b>must</b> be reported in the annual emissions inventory submittal required by §101.10 of this title (relating to Emissions Inventory Requirements). The emissions <b>must</b> be calculated using the following methodology:</p> <p>(A) Allowable Seal Gap (greater than 1/8 inch wide): <math>As</math> (square inches) = 1 square inch per tank diameter foot x tank diameter.</p> <p>(B) Measured Seal Gap: <math>Ms</math> (square inches).</p> <p>(C) Reportable Seal Gap Area: <math>Rs = Ms - As</math> in square inches.</p> <p>(D) Reportable Seal Gap/Allowable Ratio: <math>RRs = Rs</math> divided by <math>As</math>.</p> <p>(E) Tank Circumference: <math>Tc</math> (feet).</p> <p>(F) Reportable Seal Gap Length (total linear feet of seal gap greater than 1/8 inch gap width): <math>RI</math>.</p> <p>(G) Reportable Seal Gap Length/Tank Circumference Ratio: <math>RR1 = RI/Tc</math>.</p> <p>(H) Tank Emissions (with good single seal): <math>Ts =</math> <a href="#">Compilation of Air Pollutant Emission Factors (AP-42)</a> Calculation (convert to pounds/day).</p> <p>(I) Tank Emissions (with two good seals): <math>Tss =</math> AP-42 Calculation (convert to pounds/day). Note: Use maximum local monthly average ambient temperature as reported by the National Weather Service to calculate true vapor pressure.</p> <p>(J) <b>Emissions Inventory</b> Reportable emissions: <math>Tr</math> (pounds) = <math>(Ts - Tss) \times RRs \times RR1 \times 90</math> days. Note: In no case should <math>Tr</math> be greater than <math>(Ts - Tss)</math>.</p>	<p><b>replacing ‘shall’ with ‘must’, and . . clarification that the reporting of emissions from excessive seal gaps is for purposes of the Emissions Inventory.</b></p>
<p>(3) Affected persons shall install and maintain monitors to continuously measure and record operational parameters of any of the following emission control devices installed to meet applicable control requirements . Such records must be sufficient to demonstrate proper functioning of those devices to design specifications, including:</p> <p>(A) the exhaust gas temperature immediately downstream of a direct-flame incinerator;</p> <p>(B) the inlet and outlet gas temperature of a chiller or catalytic incinerator; and</p> <p>(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.</p>	
<p>(4) The results of any testing conducted in accordance with the provisions specified in §115.115(a) of this title (relating to <a href="#">Approved Test Methods</a>) <b>must</b> be maintained at an affected facility.</p>	
<p>(5) All records <b>must</b> be maintained for two years and be made available for review upon request by authorized representatives of the executive director, the <a href="#">United States Environmental Protection Agency (EPA)</a>, or local air pollution</p>	

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control agencies with jurisdiction.	
(b) For all persons in Gregg, Nueces, and Victoria Counties, the following recordkeeping requirements shall apply.	<b>No changes for these counties.</b>
* * * * *	
(c) For all persons in the Houston/Galveston/Brazoria area, the following recordkeeping requirements apply in addition to those specified in subsection (a) of this section.	<b>Adds new recordkeeping requirements for the H/G/B area {required by 1/1/09, per §115.119(c)}, including . .</b>
(1) The owner or operator of any stationary tank, reservoir, or container with a fixed roof that is not required to be equipped with a floating roof or vapor recovery system, as specified in either Table I(a) or Table II(a) of §115.112(a)(1) of this title (relating to Control Requirements), 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 storage tanks with nominal storage capacity of 25,000 gallons or less storing volatile organic liquids other than crude oil or condensate, or to storage tanks with nominal storage capacity of 40,000 gallons or less storing crude oil or condensate.	<b>records of material stored and TVP, for tanks that are exempt from controls by virtue of TVP being below the cutoff, and . .</b>
(2) 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 vapor recovery shall maintain records of the estimated annual emissions from the storage tank to document that the uncontrolled emissions are less than 25 tons per year. The records must be updated annually and must be made available for review within 72 hours upon request by authorized representatives of the executive director, the EPA, or local air pollution control agencies with jurisdiction.	<b>records of uncontrolled emissions being less than 25 tpy, for tanks that are exempt from the requirements for controlling flashed gases by virtue of being below this cutoff.</b>

§115.117. Exemptions.	Comments on June 14, 2007 revisions
(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/Brazoria areas, the following exemptions apply.	<b>Changes are only editorial, except . .</b>
(1) Except as provided in §115.116 of this title (relating to Monitoring and Recordkeeping Requirements), any volatile organic compound (VOC) with a true vapor pressure less than 1.5 pounds per square inch absolute (psia) (10.3 kilo Pascals (kPa)) at storage conditions is exempt from the requirements of this division (relating to Storage of Volatile Organic Compounds).	
(2) Crude oil and condensate stored in tanks with a nominal capacity less than 210,000 gallons (794,850 liters), prior to custody transfer, is exempt from the requirements of this division. After January 1, 2009, this exemption no longer applies in the Houston/Galveston/Brazoria area.	<b>the exemption for crude oil and condensate tanks prior to custody transfer will be eliminated for the H/G/B area, and . .</b>
(3) Storage containers that have a capacity of less than 25,000 gallons (94,625 liters) located at motor vehicle fuel dispensing facilities are exempt from the requirements of this division.	
(4) A welded 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) External floating roof tanks storing waxy, high pour point crude oils are exempt from any secondary seal requirements of	

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§115.117. Exemptions.	Comments on June 14, 2007 revisions
§115.112(a) of this title (relating to Control Requirements).	
(6) Any welded tank storing VOC having a true vapor pressure less than 4.0 psia (27.6 kPa) is exempt from any external floating roof secondary seal requirement if any of the following types of primary seals have been 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) Any welded tank storing crude oil having a true vapor pressure equal to or greater than 4.0 psia (27.6 kPa) and less than 6.0 psia (41.4 kPa) at storage conditions is exempt from any external floating roof secondary seal requirement if any of the following types of primary seals have been 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) Storage containers that have a capacity of no more than 1,000 gallons are exempt from the requirements of this division.	
(9) Condensate storage tanks or tank batteries with a throughput exceeding 1,500 barrels (63,000 gallons) per year are exempt from the requirement in §115.112(d)(4) of this title to route flashed gases to a vapor recovery system or control device if the owner or operator demonstrates using test methods specified in §115.115(c) of this title, that uncontrolled VOC emissions from the individual 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.	<b>an exemption has been added for condensate tanks if the uncontrolled VOC emissions from the tank or tank battery are less than 25 tpy.</b>
(b) For all persons in Gregg, Nueces, and Victoria Counties, the following exemptions apply.	<b>No changes for these counties.</b>
* * * * *	
(c) For all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, the following exemptions apply.	<b>No changes for these counties.</b>
* * * * *	

§115.119. Counties and Compliance Schedules.	Comments on June 14, 2007 revisions
(a) The owner or operator of each stationary tank, reservoir, or other container in which any volatile organic compound (VOC) is placed, stored, or held 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 Storage of Volatile Organic Compounds) as required by §115.930 of this title (relating to Compliance Dates).	<b>No changes to this paragraph.</b>
(b) The owner or operator of each stationary tank, reservoir, or other container in which any VOC is placed, stored, or held in Ellis, Johnson, Kaufman, Parker, and Rockwall Counties shall comply with this division as soon as practicable, but no later than March 1, 2009.	<b>No changes to this paragraph.</b>
(c) The owner or operator of each stationary tank, reservoir, or other container in which any VOC is placed, stored, or held in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall comply with the	<b>Adds a new compliance schedule, allowing until January 1, 2009 to comply with the new</b>

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<p><b>§115.119. Counties and Compliance Schedules.</b></p>	<p><b>Comments on June 14, 2007 revisions</b></p>
<p>requirements of §§115.112(d), 115.115(c), and 115.116(c) of this title (relating to Control Requirements; Approved Test Methods; and Monitoring and Recordkeeping Requirements) as soon as practicable, but no later than January 1, 2009. If compliance with these requirements would require emptying and degassing of the stationary tank, reservoir, or container, compliance is not required until the next time the stationary tank, reservoir, or container is emptied <b>or</b> degassed but no later than January 1, 2017. The owner or operator of each stationary tank, reservoir, or container with a nominal capacity less than 210,000 gallons (794,850 liters) storing crude oil and condensate prior to custody transfer in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall comply with the requirements of this division as soon as practicable but no later than January 1, 2009, regardless if compliance with these requirements would require emptying and degassing of the stationary tank, reservoir, or container.</p>	<p>requirements {delay until 1/1/2017 allowed if tank must be emptied &amp; degassed to achieve compliance}. <i>The 'or' should be an 'and'.</i></p>

**SUBCHAPTER F: MISCELLANEOUS INDUSTRIAL SOURCES  
DIVISION 3: DEGASSING OR CLEANING OF STATIONARY, MARINE, AND TRANSPORT VESSELS  
§§115.541 - 115.547, 115.549**

<p><b>§115.541. Emission Specifications.</b></p>			<p><b>Comments on June 14, 2007 revisions</b></p>
<p>(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/Brazoria areas as defined in §115.10 of this title (relating to Definitions), the following emission specifications apply to degassing during or in preparation of cleaning.</p>			<p>Changes are only editorial, except . .</p>
<p>(1) For all stationary volatile organic compound (VOC) storage tanks with a nominal storage capacity of one million gallons or more <b>and after January 1, 2009, storage tanks in the Houston/Galveston/Brazoria area with a nominal storage capacity of 250,000 gallons or greater or with a nominal storage capacity of 75,000 gallons or greater storing materials with a true vapor pressure greater than 2.6 pounds per square inch absolute (psia).</b></p>	<p>(2) For all transport vessels, as defined in §115.10 of this title, with a nominal storage capacity of 8,000 gallons or more.</p>	<p>(b) For all persons in the Beaumont/Port Arthur and Houston/Galveston/Brazoria areas, the following emission specifications apply to degassing during or in preparation of cleaning for all marine vessels, as defined in §101.1 of this title (relating to Definitions), <b>that</b> have a nominal storage capacity of 10,000 barrels (420,000 gallons) or more and contain VOC.</p>	<p><b>smaller storage tanks are to become subject to control of emissions during tank cleaning in the H/G/B area as of January 1, 2009.</b></p>
<p>(A) No person shall permit VOC emissions with a vapor space partial pressure greater than or equal to 0.5 psia (3.4 kilo Pascals (kPa)) under actual storage conditions unless the vapors are processed by a vapor control system.</p>	<p>(A) No person shall permit VOC emissions with a vapor space partial pressure greater than or equal to 0.5 psia (3.4 kPa) under actual storage conditions unless the vapors are processed by a vapor control system.</p>	<p>(1) No person shall degas or clean a tank that carried a VOC with a vapor partial pressure greater than or equal to 0.5 psia (3.4 kPa) unless the vapors are processed by a vapor control system.</p>	

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<b>§115.541. Emission Specifications.</b>			<b>Comments on June 14, 2007 revisions</b>
(B) The vapor control system <b>must</b> maintain a control efficiency of at least 90%.	(B) The vapor control system <b>must</b> maintain a control efficiency of at least 90%.	(2) The vapor control system <b>must</b> maintain a control efficiency of at least 90%.	
(C) When conducting degassing or cleaning operations, no avoidable liquid or gaseous leaks, as detected by sight or sound, <b>may</b> originate from the degassing or cleaning operations.	(C) When conducting degassing or cleaning operations, no avoidable liquid or gaseous leaks, as detected by sight or sound, <b>may</b> originate from the degassing or cleaning operations.	(3) When conducting degassing or cleaning operations, no avoidable liquid or gaseous leaks, as detected by sight or sound, <b>may</b> originate from the degassing or cleaning operations.	
(D) The intentional bypassing of a vapor control device used during degassing or cleaning is prohibited. Any visible VOC leak originating from the vapor control device or other associated product recovery device <b>must</b> be repaired as soon as practical.	(D) The intentional bypassing of a vapor control device used during degassing or cleaning is prohibited. Any visible VOC leak originating from the vapor control device or other associated product recovery device <b>must</b> be repaired as soon as practical.	(4) The intentional bypassing of a vapor control device used during degassing or cleaning is prohibited. Any visible VOC leak originating from the vapor control device or other associated product recovery device <b>must</b> be repaired as soon as possible.	
	(E) All transport vessels, as defined in §115.10 of this title, <b>must</b> be kept vapor-tight at all times until the VOC vapors remaining in the vessel are discharged to a vapor control system.	(5) All marine vessels, as defined in §101.1 of this title, containing VOC <b>must</b> have all cargo tank closures properly secured, or maintain a negative pressure within the tank when a closure is opened, and <b>must</b> have all pressure/vacuum relief valves operating within certified limits as specified by classification society or flag state until the vapors are discharged to a vapor control system if the vessel is degassed or cleaned.	

<b>§115.542. Control Requirements.</b>			<b>Comments on June 14, 2007 revisions</b>
(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/ <b>Brazoria</b> areas <b>as defined in §115.10 of this title (relating to Definitions)</b> , the following control requirements apply to stationary storage tanks and transport vessels.	(b) For all persons in the Beaumont/Port Arthur and Houston/Galveston/ <b>Brazoria</b> areas, the following control requirements apply to marine vessels.		<b>Changes are only editorial, except . .</b>
(1) No person shall permit the degassing or cleaning of volatile organic compounds (VOC) from a stationary storage tank or transport vessel unless the vapors are processed by a vapor control system.	(1) No person shall permit the degassing or cleaning of a marine vessel containing VOC unless the vapors are processed by a vapor control system.		

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§115.542. Control Requirements.		Comments on June 14, 2007 revisions
<p>(2) When degassing or cleaning is effected through the hatches of a transport vessel with a loading arm equipped with a vapor collection adapter, then pneumatic, hydraulic, or other mechanical means <b>must</b> be provided to force a vapor-tight seal between the adapter and the hatch. A means <b>must</b> be provided to minimize liquid drainage from the degassing or cleaning device when it is removed from the hatch of any transport vessel or to accomplish drainage before such removal.</p>	<p>(2) When degassing or cleaning is effected through the hatches of a marine vessel containing VOC with a loading arm equipped with a vapor collection adapter, then pneumatic, hydraulic, or other mechanical means <b>must</b> be provided to force a vapor-tight seal between the adapter and the hatch, or a negative pressure inside the cargo tank <b>must</b> be maintained. A means <b>must</b> be provided to minimize liquid drainage from the degassing or cleaning device and line when they are removed from the hatch of any marine vessel containing VOC or to accomplish drainage before such removal.</p>	
<p>(3) When degassing or cleaning is effected through the hatches or manways of stationary VOC storage tanks, all lines <b>must</b> be equipped with fittings <b>that</b> make vapor-tight connections and <b>that</b> are closed when disconnected; or equipped to permit residual VOC in the line to discharge into a recovery or disposal system after degassing or cleaning is complete.</p>		
<p>(4) Degassing and cleaning equipment <b>must</b> be designed and operated to prevent avoidable VOC leaks.</p>	<p>(3) Degassing and cleaning equipment <b>must</b> be designed and operated to prevent avoidable VOC leaks.</p>	
<p>(5) <b>In the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and until January 1, 2009, in the Houston/Galveston/Brazoria areas, vapors must</b> be routed to the control device until a turnover of at least four vapor space volumes has occurred, or four turnovers of the vapor space under a floating roof, or the partial vapor pressure is less than 0.5 pounds per square inch absolute (psia) (19,000 parts per million by weight (ppmw), or 34,000 parts per million by volume (ppmv) expressed as methane). After one of these conditions has been satisfied, the storage <b>tank or transport</b> vessel may be vented to the atmosphere for the remainder of the degassing or cleaning</p>	<p>(4) <b>In the Beaumont/Port Arthur area and until January 1, 2009, in the Houston/Galveston/Brazoria area, vapors must</b> be routed to the control device until the marine vessel is stripped VOC liquid-free and a turnover of at least four vapor space volumes has occurred, the partial vapor pressure is less than 0.5 psia (19,000 ppmw, or 34,000 ppmv expressed as methane), or the concentration of VOC is less than 20% of the LEL. After one of these conditions has been satisfied, the marine</p>	

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process.	vessel may be vented to the atmosphere for the remainder of the degassing or cleaning process.	
<p>(6) After January 1, 2009, in the Houston/Galveston/Brazoria area, vapors must be routed to the control device until the VOC measured concentration before the inlet to the control device is less than 34,000 ppmv as methane or less than 50% of the lower explosive limit (LEL). After this condition has been satisfied, the storage tank or transport vessel may be vented to the atmosphere for the remainder of the degassing or cleaning process provided that the VOC concentration remains below 34,000 ppmv as methane or less than 50% of the LEL. The VOC concentration must be measured once every 12 hours if the storage tank or transport vessel is vented continuously to the atmosphere, and upon restart of the degassing and cleaning operation if venting to the atmosphere has been suspended for more than four hours. If any measurements of the VOC concentration equal or exceed 34,000 ppmv as methane or are equal to or greater than 50% of the LEL, the storage tank or transport vessel must be routed to the control device until the concentration is below 34,000 ppmv as methane or less than 50% of the LEL. While venting to the atmosphere, measurements must continue until five consecutive readings of VOC concentrations collected at 12 hour intervals are measured to be less than 34,000 ppmv or less than 50% of the LEL.</p>	<p>(5) After January 1, 2009, in the Houston/Galveston/Brazoria area, vapors must be routed to the control device until the VOC measured concentration before the inlet to the control device is less than 34,000 ppmv as methane or less than 50% of the LEL. After this condition has been satisfied, the marine vessel may be vented to the atmosphere for the remainder of the degassing or cleaning process provided that the VOC concentration remains below 34,000 ppmv as methane or less than 50% of the LEL. The VOC concentration must be measured once every 12 hours if the marine vessel is vented continuously to the atmosphere, and upon restart of the degassing and cleaning operation if venting to the atmosphere has been suspended for more than four hours. If any measurements of the VOC concentration equal or exceed 34,000 ppmv as methane or are equal to or greater than 50% of the LEL, the marine vessel must be routed to the control device until the concentration is below 34,000 ppmv as methane or less than 50% of the LEL. While venting to the atmosphere, measurements must continue until five consecutive readings of VOC concentrations collected at 12-hour intervals are measured to be less than 34,000 ppmv or less than 50% of the LEL.</p>	<p><b>more stringent degassing standards will apply in the H/G/B area as of January 1, 2009. The ‘four turnovers’ provision will no longer apply, and follow-up monitoring will be required.</b></p>