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# TEXAS REGISTER

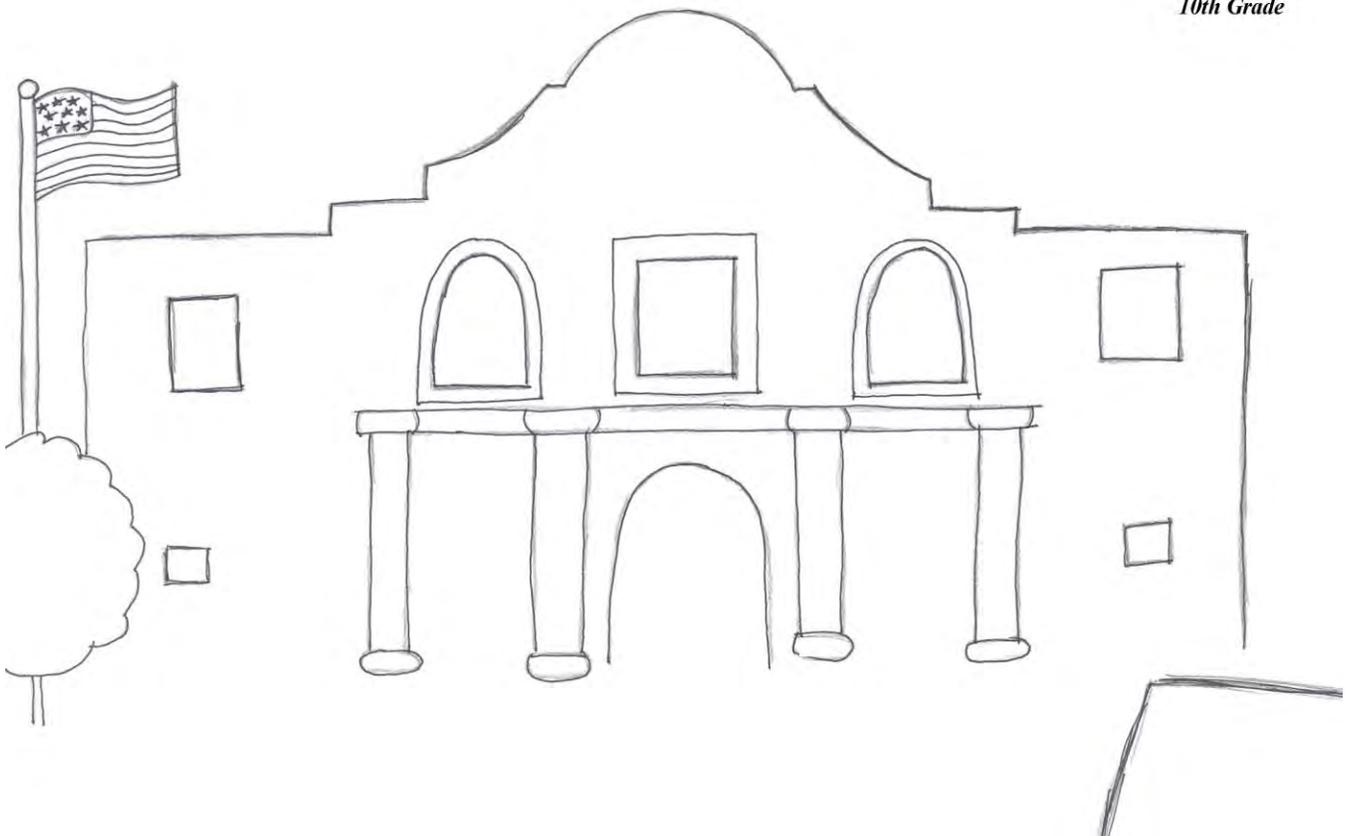
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*Amber Uballe  
10th Grade*



(3) hysterectomy procedures shall be provided in accordance with §601.8 of this title (relating to Disclosure and Consent Form for Hysterectomy); and[-]

(4) anesthesia and/or perioperative pain management (analgesia) procedures shall be in accordance with §601.9 of this title (relating to Disclosure and Consent Form for Anesthesia and/or Perioperative Pain Management (Analgesia)).

*§601.6. History.*

(a) - (l) (No change.)

(m) Effective March 4, 2007, §601.2 of this title (relating to Procedures Requiring Full Disclosure of Specific Risks and Hazards--List A) was amended to include procedures and risks and hazards for anesthesia, the digestive system treatments and procedures, the endocrine system treatments and procedures, and the hematic and lymphatic system. Section 601.3 of this title (relating to Procedures Requiring No Disclosure of Specific Risks and Hazards--List B) was amended to add and rename procedures relating to the digestive system.

*§601.9. Disclosure and Consent Form for Anesthesia and/or Perioperative Pain Management (Analgesia).*

The Texas Medical Disclosure Panel adopts the following form which shall be used to provide informed consent to a patient or person authorized to consent for the patient of the possible risks and hazards involved in anesthesia and/or perioperative pain management (analgesia).

Figure: 25 TAC §601.9

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's legal authority to adopt.

Filed with the Office of the Secretary of State on June 13, 2011.

TRD-201102152

Noah Appel, M.D.

Chairman

Texas Medical Disclosure Panel

Earliest possible date of adoption: July 24, 2011

For further information, please call: (512) 458-7111 x6972



## **TITLE 30. ENVIRONMENTAL QUALITY**

### **PART 1. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

#### **CHAPTER 115. CONTROL OF AIR POLLUTION FROM VOLATILE ORGANIC COMPOUNDS**

##### **SUBCHAPTER B. GENERAL VOLATILE ORGANIC COMPOUND SOURCES**

##### **DIVISION 1. STORAGE OF VOLATILE ORGANIC COMPOUNDS**

The Texas Commission on Environmental Quality (TCEQ or commission) proposes amendments to §§115.110, 115.112 - 115.114, and 115.119; the repeal of §§115.115 - 115.117; and new §§115.111 and 115.115 - 115.118.

If adopted, the amended, repealed, and new sections will be submitted to the United States Environmental Protection Agency (EPA) as a revision to the state implementation plan (SIP).

#### **Background and Summary of the Factual Basis for the Proposed Rules**

During the second Texas Air Quality Study (May 2005), remote sensing work indicated that there were significant unreported and underreported emissions of volatile organic compounds (VOC) from storage tanks in the Houston-Galveston-Brazoria (HGB) area, including emissions from tanks storing crude oil and condensate prior to custody transfer and floating roof or cover landing loss emissions. The commission estimated that just the unreported and underreported VOC emissions from floating roof or cover landing loss emissions in the HGB area were approximately 7,250 tons in 2003. On May 23, 2007, the commission adopted revisions to the VOC storage rules in Chapter 115, Subchapter B, Division 1, specific to the HGB area to reduce these unreported and underreported VOC emissions from storage tanks (Rule Project Number 2006-038-115-EN).

Recent emissions inventory improvement projects, such as the Barnett Shale special inventory, have indicated that similar issues with VOC emissions from storage tanks exist in other areas subject to the VOC storage rules in Chapter 115, Subchapter B, Division 1, and that these VOC emissions are substantial. The commission's 2008 Area Source Emissions Inventory indicates that VOC emissions from oil and natural gas condensate storage at production sites in the 2008 area source emissions inventory for the Dallas-Fort Worth (DFW) 1997 eight-hour ozone nonattainment area were approximately 31.6 tons per day (tpd). This is approximately 10% of the total 2008 VOC area source emissions inventory and approximately 39% of the total VOC emissions from the oil and natural gas production sector in the area source emissions inventory. The primary purpose of this proposed rulemaking is to apply a more stringent version of VOC storage tank control requirements adopted for the HGB area in 2007 in the DFW area to reduce VOC emissions from storage tanks.

The Federal Clean Air Act (FCAA) requires states to submit plans that demonstrate progress toward reducing emissions for areas that are not attaining the National Ambient Air Quality Standards (NAAQS). On April 30, 2004, the DFW area (Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties) was designated a moderate nonattainment area for the 1997 eight-hour ozone NAAQS, with a June 15, 2010, attainment deadline. Attainment of the 1997 eight-hour ozone NAAQS (expressed as 0.08 parts per million) is achieved when an area's design value from the previous ozone season does not exceed 84 parts per billion (ppb), which is mathematically equivalent to 0.084 parts per million. Because the DFW area's 2009 design value of 86 ppb exceeded this standard, the EPA reclassified the DFW area as a serious nonattainment area under the 1997 eight-hour ozone NAAQS effective January 19, 2011 (75 FR 79302). As a result of this reclassification, FCCA, §182(c)(2)(b) requires the commission to submit a Reasonable Further Progress (RFP) SIP revision to demonstrate that the DFW area is continuing to reduce emissions of ozone precursors consistent with serious nonattainment area requirements. The commission estimates that additional reductions of VOC emissions will be necessary for the DFW area to meet the RFP requirements of the FCAA. An additional purpose of this proposed rulemaking is to make VOC reductions in the DFW area to assist in meeting this RFP requirement.

Additionally, FCAA, §172(c)(1) requires that SIP revisions incorporate all reasonably available control measures, including all reasonably available control technology (RACT), for sources of relevant pollutants. As a result of the reclassification of the DFW area to serious nonattainment for the 1997 eight-hour ozone NAAQS, the commission must perform an updated RACT analysis for the DFW area. The EPA defines RACT as the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53761, September 17, 1979). FCAA, §182(b)(2) also requires that SIP revisions must include provisions to implement RACT for each category of VOC sources covered by a Control Technique Guideline (CTG) document issued by the EPA. Petroleum liquid storage is a VOC source category covered under FCAA, §182(b)(2), and the EPA has issued three CTG documents for petroleum liquid storage: EPA-450/2-77-036, EPA-450/2-78-047, and EPA-453/R-94-001 issued by the EPA in 1977, 1978, and 1994, respectively. The VOC storage rules in Chapter 115, Subchapter B, Division 1, are the commission's rules for implementing RACT for this category. FCAA, §182(b)(2) also requires that SIP revisions include provisions to implement RACT for major stationary sources of VOC emissions in the area that are not addressed by a CTG document issued by the EPA.

The control requirements for VOC storage tanks currently in effect for the HGB area under Chapter 115, Subchapter B, Division 1, have been demonstrated in the HGB area to be reasonably available, technologically feasible, and, as discussed in the Fiscal Note portion of this preamble, economically feasible.

The commission is required, at a minimum, to implement RACT for major stationary sources of VOC emissions in the DFW area that are not addressed by a CTG document issued by the EPA. The major source threshold in the DFW area is the potential to emit 50 tpy of VOC emissions.

The commission is proposing to implement the storage tank control requirements for crude oil and condensate tanks prior to custody transfer in the DFW area similar to the rules adopted for the HGB area in 2007. However, additional VOC emission reductions are anticipated to be necessary to meet the RFP requirements in the DFW area. Therefore, the commission is proposing this rulemaking with a 95% VOC control requirement on storage tanks in the DFW area over 25 tpy of VOC emissions to generate additional VOC reductions to assist in meeting the RFP requirement. The proposed 95% VOC control level is more stringent than the 90% level currently required in the HGB area and this additional stringency is being proposed for RFP purposes. The proposed 25-ton applicability is less than the major source threshold in the DFW area and these sources are included in the proposed rulemaking for RFP purposes. While the proposed rulemaking is more stringent than the current rules in the HGB area for RFP purposes, the proposed rulemaking also fulfills RACT for any major sources with crude oil and condensate tanks prior to custody transfer.

This expansion of control requirements is strengthened by a study (TCEQ Project 2010-43) the commission conducted in 2010 to evaluate emission control devices installed on crude oil and condensate tanks. The study found that all sources in the HGB area that are required to install controls capable of maintaining at least 90% VOC control efficiency on their tank batteries chose a vapor recovery unit, a flare, or both types of control devices. The choice to install these technologies when controls are required in the HGB area demonstrates their

technological feasibility. The EPA allows flares designed and operated in compliance with 40 Code of Federal Regulations (CFR) §60.18 to claim 98% VOC control efficiency. Vapor recovery units designed and operated in accordance with the proposed requirements in this rulemaking are allowed to claim 95% VOC control efficiency in the TCEQ's oil and gas standard permit.

The commission estimates that the proposed rules will result in a reduction of 14.37 tpd of VOC in the DFW area in 2012 from crude oil and condensate storage tanks, based on 2008 crude oil and condensate production forecasted to increase in 2012, by requiring a 95% reduction from sources emitting over 25 tons of VOC per year. Additional VOC emission reductions that will be achieved from other requirements in the proposed rules, such as restrictions on floating roof or cover landings and more effective floating roof and cover fittings, have not been estimated. These reductions are needed during 2012. The commission is proposing a December 1, 2012, compliance date for new or expanded requirements for the DFW area to balance the need for VOC reductions with time necessary for affected sources to install controls. For the other areas subject to clarified requirements, the commission is proposing December 1, 2012, as the compliance date for sources in the Beaumont-Port Arthur 1997 eight-hour ozone maintenance area (BPA), the HGB area and Aransas, Bexar, Calhoun, El Paso, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties to comply with the clarified requirements. If the rulemaking is adopted, the commission anticipates that affected sources in these counties will have sufficient time to conduct any testing and make other changes, if necessary.

The proposed rulemaking would also address concerns raised by stakeholders by revising Chapter 115, Subchapter B, Division 1 to clarify the rule requirements for sources in all affected areas, including the HGB area, provide additional flexibility for affected owners or operators by allowing for the use of alternative control options, and facilitate rule enforcement.

#### *General Clarification of Rule Requirements*

The proposed rulemaking would reformat the existing rules in Chapter 115, Subchapter B, Division 1, to simplify and clarify the requirements. Some of these formatting changes include: clarifying rule applicability and definitions in §115.110; repealing §115.117 and proposing new §115.111 to move exemptions to the beginning of the division; repealing §115.115 and §115.116 and proposing new §115.115 and §115.118 to split monitoring and recordkeeping into separate sections; proposing new §115.116 to contain new clarifying requirements for testing; and proposing new §115.117 to move approved test methods after all test-related requirements. In addition, the proposed rulemaking would make other non-substantive revisions to update the rule language to current *Texas Register* style and format requirements. Additional details regarding the general reformatting and clarification changes are discussed in the Section by Section Discussion portion of this preamble.

#### *Clarification of Control Options*

The commission is proposing to require an initial control device efficiency demonstration for devices required to maintain 90% or 95% control efficiency; however, the proposed demonstration is intended to be a clarification of the existing requirements and is not intended to impose any additional requirements on affected sources. The commission is also proposing to require a control device to be retested within 60 days after any modification that

could reasonably be expected to affect the efficiency of a control device. The terms *vapor recovery system* and *control device* are used synonymously in portions of the existing rules. The proposed rulemaking clarifies requirements for devices that recover and devices that destroy VOC by defining *vapor recovery unit* and using this term in rule language applicable after the compliance date. Vapor recovery units are commonly used on crude oil and condensate storage tanks and this term is the industry standard phrase to describe this equipment. The proposed rulemaking specifies design, operational parameters, and monitoring requirements for vapor recovery units. Since flares are commonly used as control devices on affected sources, the proposed rulemaking also specifies design, verification, and operational requirements for flares.

The proposed rule revisions allow the use of flares that are designed and operated in accordance with 40 CFR §60.18(b) - (f) (as amended through December 22, 2008, (73 FR 78209)). In addition to complying with the operating parameters in 40 CFR §60.18, the commission is proposing that flares must be lit at all times when VOC vapors are routed to the device. Although 40 CFR §60.18 requires the pilot to be lit at all times and requires monitoring of the flare pilot flame, the commission is also specifically requiring the flare flame to be lit to clarify that the intent of the control requirement is for both the flare flame and the pilot to be lit at all times when VOC vapors are routed to the device. The commission is requesting comments on other options to ensure the flare is lit at all times when VOC vapors are routed to the device.

An additional clarification is proposed in the requirements for emission reduction during the period when floating roofs and covers are landed. One proposed option is to send vapors to a control device from the time the storage tank has been emptied until it is within 10% of being refloated. This provides the time necessary for the feasible connection of control equipment.

#### Section by Section Discussion

In addition to the proposed amendments, the commission proposes grammatical, stylistic, and various other non-substantive changes to update the rules in accordance with current *Texas Register* style and format requirements, improve readability, establish consistency in the rules, and conform to the standards in the *Texas Legislative Council Drafting Manual*, February 2011. Such changes include appropriate and consistent use of acronyms, punctuation, section references, and certain terminology like *that*, *which*, *shall* and *must*. References to the *Dallas/Fort Worth area*, the *Houston/Galveston area*, and the *Beaumont/Port Arthur area* have been updated to the *Dallas-Fort Worth area*, the *Houston-Galveston-Brazoria area*, and the *Beaumont-Port Arthur area*, respectively, to be consistent with current terminology for the region. Throughout this division the commission proposes to specify that *true vapor pressure* has the meaning defined in 30 TAC §101.1, the absolute aggregate partial vapor pressure, measured in pounds per square inch absolute (psia), of all VOC at the temperature of storage, handling, or processing. The commission proposes to delete caveats in this division that true vapor pressure is *at storage conditions* since this requirement is included in the definition. The commission proposes to replace the phrase *internal floating roof* with *internal floating cover* throughout this division. The commission contends that both phrases refer to the same equipment and *internal floating cover* is a defined term in §101.1. The commission also proposes to remove parenthetical equivalent metric units such as pressure measurements in kilopascals,

volume measurements in liters, and distance measurements in meters. These units are not commonly used and omitting them improves rule readability. These non-substantive changes are not intended to alter the existing rule requirements in any way and are not specifically discussed in this preamble. The commission is requesting comment on any instance where these proposed technical corrections would inadvertently change the existing rule requirements.

#### Section 115.110, Applicability and Definitions

The commission proposes to change the title of §115.110 from *Definitions* to *Applicability and Definitions* to clarify the Chapter 115, Subchapter B, Division 1 rule. This title establishes consistency with other rules in Chapter 115 and improves the readability of the rule by first defining the sources affected by and terms used in the subsequent requirements.

The commission proposes subsection (a) to specify that, unless exempted in §115.111, the provisions in this division apply to any storage tank storing VOC that is located in the counties and areas listed in this subsection. Proposed paragraph (1) lists the BPA area. Proposed paragraph (2) lists the DFW area. Proposed paragraph (3) lists the El Paso area. Proposed paragraph (4) lists the HGB area. Proposed paragraph (5) lists Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties. This proposed subsection clearly states that all storage tanks in the affected counties are subject to this rule unless the tanks are exempt. This revision clarifies the applicability requirements that are currently only stated within the control requirements of §115.112(a)(1), (b)(1), (c)(1), and (d)(1).

To accommodate proposed subsection (a), the commission also proposes the definitions currently located in §115.110(1) - (9) and (10) be re-lettered as new §115.110(b)(1) - (9) and (b)(12), respectively, without revision.

Proposed subsection (b) indicates that unless the context clearly indicates otherwise or unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382), or in 30 TAC §§3.2, 101.1, or 115.10, the terms used in this division have the meanings commonly used in the field of air pollution control. Proposed subsection (b) also indicates that in addition, the following meanings apply in this division unless the context clearly indicates otherwise. The commission is requesting comments on the definitions proposed in this subsection and any additional definitions that should be included.

Proposed paragraphs (1) - (9) incorporate the corresponding definitions in existing §115.110(1) - (9), respectively, without revision.

Proposed paragraph (10) defines *storage capacity* as 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. The commission intends for the proposed definition to account for sloped floors and sumps in the average internal height component of this definition by assuming that the tank can be considered to be a cylinder whose volume is determined by area multiplied by an average height, or alternatively as the maximum amount of liquid the tank can hold if filled to the top of the tank shell with inflow and outflow pipes closed off and any floating roof or cover absent. Complicated tank geometries may require a calculus-based or integral calculation of the average height. The existing rules use several different undefined terms, including *capacity*, *storage capacity*, and *nominal storage capacity*. The commission is proposing to define stor-

age capacity and to use it consistently throughout this division. The proposed change is not intended to alter any existing rule requirements or to cause any additional sources to be subject to the existing rule requirements. The commission requests comments on alternative definitions of this term.

Proposed paragraph (11) defines *storage tank* as a stationary vessel, reservoir, or container used to store VOC. This definition excludes the following: components that are not directly involved in the containment of liquids or vapors, subsurface caverns, porous rock reservoirs, process tanks, and process vessels. Process tanks and process vessels are containers designed to contain liquids undergoing a chemical or physical reaction that is part of a process. This definition is a rephrasing of the parallel definition in 40 CFR §60.111b (as of July 1, 2010) altered for consistency with *Texas Register* formatting requirements. 40 CFR Part 60, Subpart Kb is titled *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984*. The proposed change is not intended to alter any existing rule requirements or to cause any additional sources to be subject to the existing rule requirements. The commission requests comments on alternative definitions of this term.

Proposed paragraph (12) incorporates the definition of *tank battery* in existing §115.110(10) without revision.

Proposed paragraph (13) defines *vapor recovery unit* as a device that transfers hydrocarbon vapors to a fuel liquid or gas system, a sales liquid or gas system, or a liquid storage tank. The commission intends for this term to apply to devices and associated piping that gather and transfer VOC for sale or other valuable use but not to devices that destroy VOC. The commission is requesting comments on alternative definitions for this term.

#### Section 115.111, Exemptions

The commission proposes new §115.111 that contains the exemptions currently listed in §115.117.

The commission proposes new subsection (a), moved from §115.117(a) and maintained without substantive changes, lists current exemptions that apply in the BPA, El Paso, and HGB areas, and in the DFW area through the compliance date. Except for the exemption in §115.117(a)(2), proposed to be moved to §115.111(a)(2), the exemptions in new subsection (a) are substantively the same. Sources that are currently exempt under §115.117(a)(1) and (3) - (9) should still qualify for exemption under proposed new §115.111(a), provided they still meet the appropriate conditions for exemption. Proposed exemptions in this subsection no longer apply in the DFW area after the compliance date referenced in §115.119(c). After the compliance date, the exemptions listed in proposed new §115.111(d) would apply.

Proposed new paragraph (1), contains the exemption currently located in §115.117(a)(1).

Proposed new paragraph (2), currently §115.117(a)(2), specifies that storage tanks with storage capacity less than 210,000 gallons storing crude oil or condensate prior to custody transfer in the BPA, DFW, and El Paso areas are exempt from the requirements of this division. The exemption currently in §115.117(a)(2) is no longer applicable in the HGB area and will not be included in §115.111 since it specified a January 1, 2009, expiration date.

Proposed new paragraphs (3) - (9), contain the exemptions currently located in §115.117(a)(3) - (9), respectively. Proposed

new paragraph (9) contains a clarification that it exempts storage tanks from control requirements only applicable in the HGB area.

The commission proposes new subsection (b), moved from §115.117(b) and maintained without substantive changes, listing exemptions that apply in Gregg, Nueces, and Victoria Counties.

Proposed new paragraphs (1) - (8), contains the exemptions currently located in §115.117(b)(1) - (8), respectively.

The commission proposes new subsection (c), moved from §115.117(c) and maintained without substantive changes, listing exemptions that apply in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties.

Proposed new paragraph (1), contains the exemption currently located in §115.117(c)(1).

Proposed new paragraph (2), currently §115.117(c)(2), specifies that slotted guidepoles installed in any floating roof or cover storage tank are exempt from the provisions of §115.112(c). The commission proposes to add *or cover* to *floating roof* to clarify that external floating roof and internal floating cover tanks are both included in this exemption. The commission proposes to use the term *slotted guidepoles* instead of the term *slotted sampling and gauge pipes* used in §115.117(c)(2). The commission contends that the definition of slotted guidepoles includes slotted sampling and gauge pipes, and this non-substantive change harmonizes terminology throughout this division. The commission requests comment on any situations where these changes are substantive.

Proposed new paragraphs (3) - (5) contain the exemptions currently located in §115.117(c)(3) - (5), respectively.

For clarity, the commission is proposing to place exemptions valid after the compliance date of the rule in proposed new subsection (d). While this proposed rule structure creates some redundancy, the commission expects that this approach will ultimately improve readability and facilitate a smooth transition to the new requirements of the rule.

Proposed new subsection (d) specifies exemptions that would apply in the DFW area after the compliance date. This subsection contains the exemptions currently listed in §115.117(a), applicable in the DFW area and changes described in this Section by Section Discussion.

Proposed new paragraph (1), currently §115.117(a)(1), specifies that, except as provided in §115.118, any storage tank storing VOC with a true vapor pressure, as defined in §101.1, less than 1.5 pounds psia is exempt from the requirements of this division.

The exemption currently in §115.117(a)(2) will not be included in subsection (d) since it expired on January 1, 2009, and was only applicable in the HGB area.

Proposed new paragraph (2), currently §115.117(a)(3), exempts storage tanks with a storage capacity less than 25,000 gallons located at motor vehicle fuel dispensing facilities from the requirements of this division.

Proposed new paragraph (3), currently §115.117(a)(4), specifies that a welded storage tank with a mechanical shoe primary seal that has a secondary seal from the top of the shoe seal to the storage 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.

Proposed new paragraph (4), currently §115.117(a)(5), exempts external floating roof storage tanks storing waxy, high pour point crude oils from any secondary seal requirements of new §115.112(f). *Waxy, high pour point crude oils* is defined in §115.10(48) as a crude oil with a pour point of 50 degrees Fahrenheit or higher as determined by the American Society for Testing and Materials Standard D97-66, "Test for Pour Point of Petroleum Oils."

Proposed new paragraph (5), currently §115.117(a)(6), specifies that any welded storage tank storing VOC having a true vapor pressure less than 4.0 psia is exempt from any external floating roof secondary seal requirement if any of the three types of primary seals listed in subparagraphs (A) - (C) were installed before August 22, 1980. Proposed new subparagraphs (A) - (C), currently §115.117(a)(6)(A) - (C), list the types of primary seals qualifying for the exemption: a mechanical shoe seal, a liquid-mounted foam seal, or a liquid-mounted liquid filled type seal.

Proposed new paragraph (6), currently §115.117(a)(7), specifies that any welded storage tank storing crude oil having 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 types of primary seals listed in proposed new subparagraphs (A) - (C) were installed before December 10, 1982. Proposed new subparagraphs (A) - (C), currently §115.117(a)(7)(A) - (C), list the types of primary seals qualifying for the exemption: a mechanical shoe seal, a liquid-mounted foam seal, or a liquid-mounted liquid filled type seal. The proposed exemption does not contain the clarification included in §115.117(a)(7) that true vapor pressure is measured at storage conditions since this requirement is included in the definition of *true vapor pressure* in §101.1.

Proposed new paragraph (7), currently §115.117(a)(8), exempts storage tanks with storage capacity less than 1,000 gallons from the requirements of this division.

Proposed new paragraph (8), currently §115.117(a)(9), specifies that storage tanks or tank batteries storing condensate, as defined in §101.1, with a throughput exceeding 1,500 barrels (63,000 gallons) per year are exempt from the requirement in §115.112(f)(4) to route flashed gases to a vapor recovery unit or control device if the owner or operator demonstrates, using test methods specified in §115.117, that uncontrolled VOC emissions from the individual storage tank, or from the aggregate of storage tanks in a tank battery, are less than 25 tpy on a rolling 12-month basis. Stakeholders have expressed confusion between the meaning of the word *condensate* used in this division and its common use in the oil and gas exploration and production industry. Therefore, the commission proposes to add the phrase *as defined in §101.1 of this title* to clarify that *condensate* has the meaning defined in §101.1: liquids that result from the cooling and/or pressure changes of produced natural gas. Once these liquids are processed at gas plants or refineries or in any other manner, they are no longer defined as condensates.

#### *Section 115.112, Control Requirements*

Throughout §115.112, the description *stationary tank, reservoir, or other container* has been changed to *storage tank*. The commission contends that the proposed definition of storage tank in §115.110(11) includes these items and its use harmonizes terminology in this division.

The commission proposes to amend subsection (a) to specify that the control requirements applicable prior to this rulemaking

in the BPA, DFW, and El Paso areas, as defined in §115.10, would continue to apply except for the DFW area where the applicability would continue until the compliance date for the DFW area specified in §115.119(c)(2).

Throughout subsection (a), the proposed amendment includes adding *or cover to roof* wherever both external floating roofs and internal floating covers are described.

The commission proposes to replace Tables I(a) and II(a) in §115.112(a)(1) with new tables. The commission proposes to move the title of each table from the first several rows to before the table to improve the accessibility of the table and to harmonize the wording of both table titles to start with *Required Control for Storage Tanks*. The commission proposes to use terms consistent with the rest of this subsection in the proposed column headers. Specifically, the header of the first column of proposed Tables I(a) and II(a) in §115.112(a)(1) is *True Vapor Pressure* rather than *True Vapor Pressure of Compound at Storage Conditions*. The header of the second column of proposed Tables I(a) and II(a) in §115.112(a)(1) is *Storage Capacity* rather than *Nominal Storage Capacity*. The header of the third column of proposed Tables I(a) and II(a) in §115.112(a)(1) is *Control Requirements* rather than *Emission Control Requirements*. The commission proposes to remove parenthetical metric equivalent measurements of pressure and volume. The commission proposes to delete the rows from existing Tables I(a) and II(a) in §115.112(a)(1) that listed the required control requirement as *None* for tanks with storage capacity less than 1,000 gallons or storing VOC with true vapor pressure less than 1.5 psia since these situations are explicitly exempted in proposed §115.111. The commission also proposes to repeat the true vapor pressure range in each row to comply with *Texas Register* style and format requirements.

The commission proposes to amend paragraph (3) to add as *defined in §115.10 of this title* after *vapor recovery systems* to clarify that vapor recovery systems has the meaning specified in §115.10: any control system that utilizes vapor collection equipment to route VOC to a control device that reduces VOC emissions. The commission also proposes to explicitly require that any flare used must be designed and operated according to 40 CFR §60.18(b) - (f). In addition to complying with the operating parameters in 40 CFR §60.18, the commission is proposing that flares must be lit at all times when VOC vapors are routed to the device. Although 40 CFR §60.18 requires the pilot to be lit at all times and requires monitoring of the flare pilot flame, the commission is also specifically requiring the flare flame to be lit to clarify that the intent of the control requirement is for both the flare flame and the pilot to be lit at all times when VOC vapors are routed to the device.

The commission contends that all changes proposed in subsection (a), except the applicability date and explicit requirements for flare design and operation, are non-substantive and requests comment on any instance where these proposed amendment would inadvertently change the existing rule requirements.

The commission proposes to amend subsection (b) to specify the control requirements in Gregg, Nueces, and Victoria Counties.

Throughout subsection (b), the proposed amendment includes adding *or cover to roof* wherever both external floating roofs and internal floating covers are described.

The commission proposes to add clarifying language in paragraph (1) that references to Tables I(a) and II(a) are to the tables in §115.112(a)(1). The commission also proposes to explicitly

require that any flare used must be designed and operated according to 40 CFR §60.18(b) - (f). In addition to complying with the operating parameters in 40 CFR §60.18, the commission is proposing that flares must be lit at all times when VOC vapors are routed to the device. Although 40 CFR §60.18 requires the pilot to be lit at all times and requires monitoring of the flare pilot flame, the commission is also specifically requiring the flare flame to be lit to clarify that the intent of the control requirement is for both the flare flame and the pilot to be lit at all times when VOC vapors are routed to the device.

The commission contends that all changes proposed in subsection (b), except the applicability date and explicit requirements for flare design and operation, are non-substantive and requests comment on any instance where these proposed amendments would inadvertently change the existing rule requirements.

The commission proposes to amend subsection (c) to specify the control requirements in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties.

Throughout subsection (c), the proposed amendment includes adding *or cover to roof* wherever both external floating roofs and internal floating covers are described.

In the proposed amendment to paragraph (1), the commission explicitly requires that any flare used must be designed and operated according to 40 CFR §60.18(b) - (f). In addition to complying with the operating parameters in 40 CFR §60.18, the commission is proposing that flares must be lit at all times when VOC vapors are routed to the device. Although 40 CFR §60.18 requires the pilot to be lit at all times and requires monitoring of the flare pilot flame, the commission is also specifically requiring the flare flame to be lit to clarify that the intent of the control requirement is for both the flare flame and the pilot to be lit at all times when VOC vapors are routed to the device.

The commission proposes to replace Table I(b) in §115.112(c)(1) and specify that references to Table I(b) are §115.112(c)(1). The commission proposes to move the title of the table from the first several rows to before the table to improve the accessibility of the table and to harmonize the wording of this table title with Tables I(a) and II(a) in subsection (a)(1) by starting all table titles with *Required Control for Storage Tanks*. The commission proposes to use terms consistent with the rest of this subsection in the proposed column headers. Specifically, the header of the first column of proposed Table I(b) in subsection (c)(1) is *True Vapor Pressure* rather than *True Vapor Pressure of Compound at Storage Conditions*. The proposed header of the second column of proposed Table I(b) in subsection (c)(1) is *Storage Capacity* rather than *Nominal Storage Capacity*. The header of the third column of proposed Table I(b) in subsection (c)(1) is *Control Requirements* rather than *Emission Control Requirements*. The commission proposes to delete the rows from existing Table I(b) in subsection (c)(1) that listed the required control requirement as *None* for tanks with storage capacity less than 1,000 gallons or storing VOC with true vapor pressure less than 1.5 psia since these situations are explicitly exempted in proposed §115.111. The commission also proposes to repeat the true vapor pressure range for each row to comply with *Texas Register* style and format requirements.

The commission proposes to amend paragraph (3) to replace the phrase *vapor-loss control devices* with *control devices*. The commission contends that the phrase *vapor-loss control device(s)* in paragraph (3) has the same meaning as the phrase *control device* used in §115.112(a)(1) and (b)(1) because both

include floating roofs, floating covers, and vapor recovery systems.

The commission proposes to amend subparagraph (A) to replace the phrase *control equipment* with *control devices* because both phrases refer to internal floating covers and external floating roofs.

In the proposed amendment to subparagraph (B), the commission explicitly requires that any flare used must be designed and operated according to 40 CFR §60.18(b) - (f). In addition to complying with the operating parameters in 40 CFR §60.18, the commission is proposing that flares must be lit at all times when VOC vapors are routed to the device. Although 40 CFR §60.18 requires the pilot to be lit at all times and requires monitoring of the flare pilot flame, the commission is also specifically requiring the flare flame to be lit to clarify that the intent of the control requirement is for both the flare flame and the pilot to be lit at all times when VOC vapors are routed to the device.

The commission contends that all changes proposed in subsection (c), except the applicability date and explicit requirements for flare design and operation, are non-substantive and requests comment on any instance where these proposed amendments would inadvertently change the existing rule requirements.

The commission proposes to amend subsection (d), to specify control requirements applicable in the HGB area until the compliance date specified in §115.119(e)(2). After that date, control requirements in §115.112(e) would apply. Throughout subsection (d), the proposed amendment includes adding *or cover to roof* wherever both external floating roofs and internal floating covers are described.

The commission proposes to amend paragraph (2)(H) to change clarifying references to a refill after the tank has been degassed and cleaned in accordance with §§115.541 - 115.547 to refer only to cleaning. This is a non-substantive change that harmonizes the language with degassing requirements in Subchapter F, Division 3. The original language was intended to clarify that the first time the tank is filled and any other time the tank is filled after cleaning are included exceptions. The proposed language accomplishes the same purpose while avoiding unnecessary connection between the two rules.

The commission proposes to amend paragraph (4) to specify that condensate has the meaning defined in §101.1 when used to determine the need for a vapor recovery unit or control device on a storage tank or tank battery storing condensate prior to custody transfer.

The commission contends that all changes proposed in subsection (d), except the applicability date, are non-substantive and requests comment on any instance where these proposed amendments would inadvertently change the existing rule requirements.

The commission proposes subsection (e) specifying control requirements applicable in the HGB area after the compliance dates specified in §115.119(e). These control requirements are based on requirements in §115.112(d) applicable prior to this rulemaking in the HGB area.

Proposed paragraph (1) specifies that 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 equipped with at least the control device specified in either Table 1 in §115.112(e)(1) for VOC other than crude oil and condensate, or

Table 2 in §115.112(e)(1) for crude oil and condensate. Tables 1 and 2 in §115.112(e)(1) are amended versions of Tables I(a) and II(a) of §115.112(a)(1). The commission proposes to change the term *vapor recovery system* from the original language in Tables I(a) and II(a) of §115.112(a)(1) to *vapor recovery unit or control device*. The commission proposes this change because the combination of *vapor recovery unit* and *control device*, with the proposed definition of *vapor recovery unit* in §115.110 and the definition of *control device* in §101.1 is equivalent to the definition of *vapor recovery system* in §115.10, while more clearly distinguishing the two when used separately in other portions of this division.

The commission proposes paragraph (2) specifying that for floating roof or cover storage tanks subject to the provisions of subsection (e)(1), the requirements in proposed subparagraphs (A) - (J) apply. Proposed paragraph (2) contains requirements currently applicable in the HGB area and located in §115.112(d)(2). Proposed subparagraphs (A) and (B) together contain the requirements currently located in §115.112(d)(2)(A). Proposed subparagraphs (C) - (I) contain requirements currently applicable in the HGB area and located in §115.112(d)(2)(B) - (H), respectively, with only non-substantive changes except as described in this Section by Section Discussion.

Proposed subparagraph (A) specifies that all openings in an internal floating cover or external floating roof, as defined in §115.10, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, must provide a projection below the liquid surface. This proposed subparagraph contains the portions of the requirements in §115.112(d)(2)(A), applicable in the HGB area prior to this rulemaking that are not in proposed subparagraph (B). The proposed subparagraph contains requirements that the deck cover be equipped with a gasket in good operating condition between the cover and the deck. It further specifies that the deck cover must be closed with a gap of no more than 1/8 inch, except when the cover must be open for access. The commission's intent is that the maximum gap requirement is an indication of a gasket in good operating condition.

Proposed subparagraph (B) states that 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 or cover 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. This proposed subparagraph contains the portions of the requirements in §115.112(d)(2)(A) applicable in the HGB area prior to this rulemaking that are not in proposed subparagraph (A).

Proposed subparagraph (C) specifies that 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. This proposed subparagraph contains the same requirement as §115.112(d)(2)(B) applicable in the HGB area prior to this rulemaking.

The commission proposes subparagraph (D) allowing each opening into the internal floating cover for a fixed roof support column to be equipped with a flexible fabric sleeve seal instead

of a deck cover. This proposed subparagraph contains the same requirement as §115.112(d)(2)(C) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (E) specifies that any roof or cover 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 internal floating cover tanks are not subject to this requirement. This proposed subparagraph contains the same requirement as §115.112(d)(2)(D) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (F) specifies there must be no visible holes, tears, or other openings in any seal or seal fabric. This proposed subparagraph contains the same requirement as §115.112(d)(2)(E) applicable in the HGB area prior to this rulemaking.

The commission proposes subparagraph (G) specifying that 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 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 must be no greater than 1.0 square inch per foot of storage tank diameter. This proposed subparagraph contains the same requirement as §115.112(d)(2)(F) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (H) specifies that each opening for a slotted guidepole in an external floating roof storage tank must be equipped with one of the control devices in this subparagraph. Proposed clause (i) lists the first option: a pole wiper and a pole float that has a seal at or above the height of the pole wiper. Proposed new (ii) lists the second option: a pole wiper and a pole sleeve. Proposed clause (iii) lists the third option: an internal sleeve emission control system. Proposed clause (iv) lists the fourth option: a retrofit to a solid guidepole system. Proposed clause (v) lists the fifth option: a flexible enclosure system. And proposed clause (vi) lists the sixth option: a cover on an external floating roof tank. Proposed subparagraph (H)(i) - (vi) is identical to the requirements in §115.112(d)(2)(G), except for non-substantive grammatical changes. Proposed clause (i) has been rephrased in a non-substantive manner; however, the commission solicits comments on situations when this wording would inadvertently differ from §115.112(d)(2)(G)(i).

The commission proposes subparagraph (I) that requires a floating roof or cover to be floating on the liquid surface at all times except when it is supported by the leg supports or other support devices (e.g., hangers from the fixed roof) during the initial fill or the refill after the tank has been cleaned or as allowed under the circumstances in the clauses of this subparagraph. The proposed subparagraph is substantively equivalent to current §115.112(d)(2)(H). Requirements in all of these proposed clauses, with the exception of clause (i), (iii), (iv), and (v), are substantively equivalent to clauses in current §115.112(d)(2)(H) in effect in the HGB area prior to this rulemaking. The phrase *roof* is proposed to be changed to *roof or cover* when it applies to both external floating roof and internal floating covers.

Proposed clause (i) allows a roof or cover landing when necessary for preventive maintenance, roof or cover 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. Proposed clause (i) allows roof or cover landings for preventive maintenance, roof or cover repair, or removal and installation of a secondary seal. It clarifies the commission's intent that the existing allowance for maintenance or inspection in the HGB area means that product must not be transferred into or out of the storage tank, emissions must be minimized, and the repair must be completed within seven calendar days. The commission intends for the activities in this clause to harmonize with the exemption from applicable degassing requirements in Chapter 115, Subchapter F, Division 3.

Proposed clause (ii) allows a roof or cover landing when necessary for supporting a change in service to an incompatible liquid.

Proposed clause (iii) allows a roof or cover landing when the storage tank has a storage capacity less than 25,000 gallons. Proposed clause (iii) does not include the allowance for roof or cover landings on tanks storing VOC with vapor pressure less than 1.5 psia included in §115.112(d)(2)(H) because this situation is explicitly exempted in §115.111.

Proposed clause (iv) allows a roof or cover landing 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 or cover is within 10% by volume of being refloated. Proposed clause (iv) changes the start time of vapor control from the moment the floating roof or cover is landed to the time the storage tank has been emptied to the extent practical or the drain pump loses suction. This allows time for a control device to be connected to the tank in a manner that can capture VOC from the vapor space beneath the landed roof or cover. The current language requires the control device to be connected and operating the moment the vapor space develops, which is an infeasible condition. This requirement will not result in additional VOC emissions since VOC vapors are not emitted because the vapor space below the landed roof or cover is enlarging when the liquid level is dropping.

Proposed clause (v) allows a roof or cover landing when all VOC emissions from the tank, including emissions from roof or cover landings, have been included in a floating roof or cover storage tank emissions limit or cap approved under 30 TAC Chapter 116 prior to the compliance date of clause (v). The proposed end date for permit approval coincides with the compliance date of the rule in order to allow those entities who have permitted these emissions to continue to land their floating roofs or covers as authorized. When the current language in §115.112(d)(2)(H) was first adopted in 2007, the commission was beginning the process of including landing emissions in permits. The permitting schedule for these emissions required all regulated entities in Standard Industrial Classifications (SIC code) cited in 30 TAC §101.221 to seek authorization for these emissions by January 5, 2012, with the majority of affected entities required to apply for authorization by January 5, 2008, and any entities in uncited SIC codes to apply for authorization by January 5, 2013. Requiring these emissions to be authorized prior to the compliance date for this clause should provide ample time for all entities that desire to apply for and receive authorization for these emissions.

Proposed clause (vi) allows a roof or cover landing when all VOC emissions from floating roof or cover landings at the regulated entity, as defined in §101.1, are less than 25 tpy.

The commission proposes paragraph (3) specifying that control devices used to comply with subsection (e) must meet one of

the conditions in paragraph (3) at all times when VOC vapors are routed to the device.

Proposed subparagraph (A) requires a control device, other than a vapor recovery unit or a flare, to maintain a minimum control efficiency of at least 90%. This proposed subparagraph contains the same requirement as §115.112(d)(3) applicable in the HGB area prior to this rulemaking except that this subparagraph applies to control devices other than vapor recovery units or flares.

Proposed subparagraph (B) requires a vapor recovery unit to be designed to process all VOC vapor generated by the maximum crude oil and condensate throughput of the storage tank and that it transfer recovered vapors to a pipe or container that is vapor-tight, as defined in §115.10. This proposed subparagraph contains requirements not currently applicable in the HGB area. The commission's intent is to assure that vapor recovery units will function effectively to capture and transfer all of the volatilizing VOC from a storage tank under normal operating conditions. The design capacity of the vapor recovery unit can be determined by applying the test methods in §115.117 for existing tanks or computer simulations of expected maximum throughput for new tanks. Owners or operators need to maintain records of the capacity determination in order to demonstrate compliance with this requirement. The requirement that the pipe or container be vapor-tight is designed to assure that the vapors are used for the beneficial purpose of sale or fuel rather than merely emitted to the atmosphere.

Proposed subparagraph (C) requires a flare to be designed and operated in accordance with 40 CFR §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. This proposed subparagraph contains requirements not currently applicable in the HGB area. It separates flares from the 90% control efficiency requirement in §115.112(d)(3) currently applicable in the HGB area. Although 40 CFR §60.18 requires the pilot to be lit at all times and requires monitoring of the flare pilot flame, the commission is also specifically requiring the flare flame to be lit to clarify that the intent of the rule is for both the flare flame and the pilot to be lit at all times when VOC vapors are routed to the device.

The commission proposes paragraph (4) requiring storage tanks storing condensate, as defined in §101.1, prior to custody transfer to route flashed gases to a vapor recovery unit 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. The commission uses a 1,500 barrel per year threshold because this equates to 25 tons of VOC per year using the 33.3 pound per barrel emission factor of proposed paragraph (5)(B). This proposed paragraph contains the same requirements as §115.112(d)(4) applicable in the HGB area prior to this rulemaking except that *condensate* has the definition from §101.1 and *vapor recovery unit* has been substituted for *vapor recovery system* to better differentiate these devices from other control devices.

The commission proposes paragraph (5) requiring that 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 unit or control device if the uncontrolled VOC emissions from an individual storage tank, or from the aggregate of storage tanks in a tank battery, have the potential to equal or exceed 25 tpy on a rolling 12-month basis. Uncontrolled emissions must be estimated by one of the methods in paragraph (5); however, if emissions determined using direct measurements or

other methods approved by the executive director under paragraph (5)(A) or (B) is higher than emissions estimated using the default factors or charts in paragraph (5)(C) or (D), the higher values must be used. Proposed paragraph (5) contains the same requirements as §115.112(d)(5) applicable in the HGB area prior to this rulemaking except that *vapor recovery unit* has been substituted for *vapor recovery system* to better differentiate these devices from other control devices.

Proposed new subparagraph (A) lists the first option: direct measurement using the measuring instruments and methods specified in §115.117. This proposed subparagraph contains the same requirements as §115.112(d)(5)(A) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (B) lists the second option: simulations pre-approved by the executive director. The commission's Air Permits Division and Air Quality Division have produced guidance documents describing test methods and computer simulations to measure or estimate working, breathing, and flash emissions from storage tanks that are recommended for use in air permit applications and emissions inventory preparation. The guidance documents are Air Permits Division Reference Guide APDG 5942, *Calculating Volatile Organic Compounds Flash Emissions from Crude Oil and Condensate Tanks at Oil and Gas Production Sites*, and *Emission Inventory Guidelines, Appendix A, Technical Supplement 6*, TCEQ publication number RG-360A. Air Quality Division staff who review such calculations for emissions inventory reporting will review the simulation use. This proposed subparagraph contains the same requirements as §115.112(d)(5)(D) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (C) lists the third option: 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. These emission factors come from a commission-funded study, *VOC Emissions from Oil and Condensate Storage Tanks*, October 6, 2006. This proposed subparagraph contains the same requirements as §115.112(d)(5)(B) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (D) lists the fourth option available for crude oil storage only; using the chart in Exhibit 2 of the EPA 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. This proposed subparagraph contains the same requirements as §115.112(d)(5)(C) applicable in the HGB area prior to this rulemaking. The chart in Exhibit 2 of the Natural Gas Star publication is also included in the September, 2009, version of TCEQ Air Permits Division Reference Guide APDG 5942, *Calculating Volatile Organic Compounds Flash Emissions from Crude Oil and Condensate Tanks at Oil and Gas Production Sites*.

The commission proposes subsection (f) specifying control requirements applicable in the DFW area after the compliance dates specified in §115.119(c). These control requirements are more stringent than the requirements in §115.112(d) applicable prior to this rulemaking in the HGB area.

Proposed paragraph (1) specifies that 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 equipped

with at least the control device specified in either Table f1 in §115.112(f)(1) for VOC other than crude oil and condensate, or Table f2 in §115.112(f)(1) for crude oil and condensate. Tables f1 and f2 are amended versions of Tables I(a) and II(a) of §115.112(a)(1). The commission proposes to change the term *vapor recovery system* from the original language in Tables I(a) and II(a) of §115.112(a)(1) to *vapor recovery unit or control device*. The commission proposes this change because the combination of *vapor recovery unit* and *control device*, with the proposed definition of *vapor recovery unit* in §115.110 and the definition of *control device* in §101.1 is equivalent to the definition of *vapor recovery system* in §115.10, while more clearly distinguishing the two when used separately in other portions of this division.

The commission proposes paragraph (2) specifying that for floating roof or cover storage tanks subject to the provisions of subsection (f)(1), the requirements in proposed subparagraphs (A) - (J) apply. Proposed paragraph (2) contains requirements currently applicable in the HGB area and located in §115.112(d)(2). Proposed subparagraphs (A) and (B) together contain the requirements currently located in §115.112(d)(2)(A). Proposed subparagraphs (C) - (I) contain requirements currently applicable in the HGB area and located in §115.112(d)(2)(B) - (H), respectively, with only non-substantive changes except as described in this Section by Section Discussion.

Proposed subparagraph (A) specifies that all openings in an internal floating cover or external floating roof, as defined in §115.10, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, must provide a projection below the liquid surface. This proposed subparagraph contains the portions of the requirements in §115.112(d)(2)(A) applicable in the HGB area prior to this rulemaking that are not in proposed subparagraph (B). The proposed subparagraph contains requirements that the deck cover be equipped with a gasket in good operating condition between the cover and the deck. It further specifies that the deck cover must be closed with a gap of no more than 1/8 inch, except when the cover must be open for access. The commission's intent is that the maximum gap requirement serves as an indication of a gasket in good operating condition.

Proposed subparagraph (B) states that 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 or cover 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. This proposed subparagraph contains the portions of the requirements in §115.112(d)(2)(A) applicable in the HGB area prior to this rulemaking that are not in proposed subparagraph (A).

Proposed subparagraph (C) specifies that 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. This proposed subparagraph contains the same requirement as §115.112(d)(2)(B) applicable in the HGB area prior to this rulemaking.

The commission proposes subparagraph (D) allowing each opening into the internal floating cover for a fixed roof support column to be equipped with a flexible fabric sleeve seal instead of a deck cover. This proposed subparagraph contains the same requirement as §115.112(d)(2)(C) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (E) specifies that any roof or cover 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 internal floating cover tanks are not subject to this requirement. This proposed subparagraph contains the same requirement as §115.112(d)(2)(D) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (F) specifies there must be no visible holes, tears, or other openings in any seal or seal fabric. This proposed subparagraph contains the same requirement as §115.112(d)(2)(E) applicable in the HGB area prior to this rulemaking.

The commission proposes subparagraph (G) specifying that 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 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 must be no greater than 1.0 square inch per foot of storage tank diameter. This proposed subparagraph contains the same requirement as §115.112(d)(2)(F) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (H) specifies that each opening for a slotted guidepole in an external floating roof storage tank must be equipped with one of the control devices in this subparagraph. Proposed clause (i) lists the first option: a pole wiper and a pole float that has a seal at or above the height of the pole wiper. Proposed clause (ii) lists the second option: a pole wiper and a pole sleeve. Proposed clause (iii) lists the third option: an internal sleeve emission control system. Proposed clause (iv) lists the fourth option: a retrofit to a solid guidepole system. Proposed clause (v) lists the fifth option: a flexible enclosure system. Proposed clause (vi) lists the sixth option: a cover on an external floating roof tank. Proposed §115.112(f)(2)(H)(i) - (vi) is identical to the requirements in §115.112(d)(2)(G) except for non-substantive grammatical changes. Proposed clause (i) has been rephrased in a non-substantive manner; however the commission solicits comments on situations when this wording would inadvertently differ from §115.112(d)(2)(G)(i).

The commission proposes subparagraph (I) that requires a floating roof or cover to be floating on the liquid surface at all times except when it is supported by the leg supports or other support devices (e.g., hangers from the fixed roof) during the initial fill or the refill after the tank has been cleaned or as allowed under the circumstances in the clauses of this subparagraph. The proposed subparagraph is substantively equivalent to current §115.112(d)(2)(H). Requirements in all of these proposed new clauses, with the exception of clauses (i), (iii), (iv), and (v), are substantively equivalent to clauses in current §115.112(d)(2)(H) in effect in the HGB area prior to this rulemaking.

Proposed clause (i) allows a roof or cover landing when necessary for preventive maintenance, roof or cover 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. Proposed clause (i) allows roof or cover landings for preventive maintenance, roof or cover repair, or removal and installation of a secondary seal. It clarifies the commission's intent that the existing allowance for maintenance or inspection in the HGB area means that product must not be moved in or out of the storage tank, emissions must be minimized and the repair must be completed within seven calendar days. The commission intends for the activities in this clause to harmonize with the exemption from applicable degassing requirements in Chapter 115, Subchapter F, Division 3.

Proposed clause (ii) allows a roof or cover landing when necessary for supporting a change in service to an incompatible liquid.

Proposed clause (iii) allows roof or cover landings for storage tanks with storage capacity less than 25,000 gallons. Proposed clause (iii) does not include the allowance for roof or cover landings on tanks storing VOC with vapor pressure less than 1.5 psia included in §115.112(d)(2)(H) because this situation is explicitly exempted in §115.111.

Proposed clause (iv) allows a roof or cover landing 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 or cover is within 10% by volume of being refloated. The current language requires the control device to be connected and operating the moment the vapor space develops, which is an infeasible condition. Proposed clause (iv) changes the start time of vapor control from the moment the floating roof or cover is landed to the time the storage tank has been emptied to the extent practical or the drain pump loses suction. This process allows time for a control device to be connected to the tank in a manner that can capture VOC from the vapor space beneath the landed roof or cover. This requirement will not result in additional VOC emissions since VOC vapors are not released because the vapor space below the landed roof or cover is enlarging and air or blanket gas is flowing in when the liquid level is dropping.

Proposed clause (v) allows a roof or cover landing when all VOC emissions from the tank, including emissions from roof or cover landings, have been included in a floating roof or cover storage tank emissions limit or cap approved under Chapter 116 prior to the compliance date of this clause. The proposed end date for permit approval coincides with the compliance date of the rule in order to allow those entities who have permitted these emissions to continue to land their floating roofs or covers as authorized. When the current language in §115.112(d)(2)(H) was first adopted in 2007, the commission was beginning the process of including landing emissions in permits. The permitting schedule for these emissions required all regulated entities in SIC code cited in §101.221 to seek authorization for these emissions by January 5, 2012, with the majority of affected entities required to apply for authorization by January 5, 2008, and any entities in uncited SIC codes to apply for authorization by January 5, 2013. Requiring these emissions to be authorized prior to the compliance date for this clause should provide ample time for all entities that desire to apply for and receive authorization for these emissions.

Proposed clause (vi) allows a roof or cover landing when all VOC emissions from floating roof or cover landings at the regulated entity, as defined in §101.1, are less than 25 tpy.

The commission proposes paragraph (3) specifying that control devices used to comply with subsection (f) must meet one of the conditions in this paragraph at all times when VOC vapors are routed to the device.

Proposed subparagraph (A) requires a control device, other than a vapor recovery unit or a flare, to maintain a minimum control efficiency of at least 95%. The commission proposes to increase the stringency of the control efficiency beyond the 90% level currently required in the HGB area. The increased stringency is necessary to generate additional VOC reductions for inclusion in the proposed DFW Reasonable Further Progress State Implementation Plan Revision for the 1997 Eight-Hour Ozone Standard (Project Number 2010-023-SIP-NR), scheduled for proposal on June 8, 2011. The commission conducted a study (TCEQ Project 2010-43) in 2010 to evaluate emission control devices installed on crude oil and condensate tanks. The study found that all sources in the HGB area that are required to install controls on their tank batteries capable of exceeding a 90% control efficiency requirement chose a vapor recovery unit, a flare, or both types of control devices. When properly operated, each of these control devices can be expected to attain or exceed a 95% control efficiency requirement.

Proposed subparagraph (B) requires a vapor recovery unit to be designed to process all VOC vapor generated by the maximum crude oil and condensate throughput of the storage tank and that it transfer recovered vapors to a pipe or container that is vapor-tight, as defined in §115.10. This proposed subparagraph contains requirements not currently applicable in the HGB area. The commission's intent is to assure that vapor recovery units will function effectively to capture and transfer all of the VOC vapors from a storage tank under normal operating conditions. The design capacity of the vapor recovery unit can be determined by applying the test methods in §115.117 for existing tanks or computer simulations of expected maximum throughput for new tanks. Owners or operators need to maintain records of the capacity determination in order to demonstrate compliance with this requirement. The requirement that the pipe or container be vapor-tight is designed to assure that the vapors are used for the beneficial purpose of sale or fuel rather than merely emitted to the atmosphere.

Proposed subparagraph (C) requires a flare to be designed and operated in accordance with 40 CFR §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. This proposed subparagraph separates flares from the 95% control efficiency requirement. Although 40 CFR §60.18 requires the pilot to be lit at all times and requires monitoring of the flare pilot flame, the commission is also specifically requiring the flare flame to be lit to clarify that the intent of the rule is for both the flare flame and the pilot to be lit at all times when VOC vapors are routed to the device.

The commission proposes paragraph (4) requiring storage tanks storing condensate, as defined in §101.1, prior to custody transfer to route flashed gases to a vapor recovery unit 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. The commission uses a 1,500 barrel per year threshold because this equates to 25 tons of VOC emissions per year using the 33.3 pound per barrel emission factor of proposed paragraph (5)(B). This proposed paragraph contains the same requirements as §115.112(d)(4) applicable in the HGB area prior to this rulemaking except that *condensate* has the definition from

§101.1 and *vapor recovery unit* has been substituted for *vapor recovery system* to better differentiate these devices from other control devices.

The commission proposes paragraph (5) requiring that 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 unit or control device if the uncontrolled VOC emissions from an individual storage tank, or from the aggregate of storage tanks in a tank battery, have the potential to equal or exceed 25 tpy on a rolling 12-month basis. Uncontrolled emissions must be estimated by one of the methods in this paragraph; however, if emissions determined using direct measurements or other methods approved by the executive director under paragraph (5)(A) or (B) are higher than emissions estimated using the default factors or charts in paragraph (5)(C) or (D), the higher values must be used. This proposed paragraph contains the same requirements as §115.112(d)(5) applicable in the HGB area prior to this rulemaking except that *vapor recovery unit* has been substituted for *vapor recovery system* to better differentiate these devices from other control devices.

Proposed subparagraph (A) lists the first option: direct measurement using the measuring instruments and methods specified in §115.117. This proposed subparagraph contains the same requirements as §115.112(d)(5)(A) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (B) lists the second option: other test methods or computer simulations pre-approved by the executive director. The commission's Air Permits Division and Air Quality Division have produced guidance documents describing test methods and computer simulations to measure or estimate working, breathing, and flash emissions from storage tanks that are recommended for use in air permit applications and emission inventory preparation. The guidance documents are Air Permits Division Reference Guide APDG 5942, *Calculating Volatile Organic Compounds Flash Emissions from Crude Oil and Condensate Tanks at Oil and Gas Production Sites*, and *Emission Inventory Guidelines, Appendix A, Technical Supplement 6*, TCEQ publication number RG-360A. Air Quality Division staff who review such calculations for emissions inventory reporting will review the simulation use. This proposed subparagraph contains the same requirements as §115.112(d)(5)(D) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (C) lists the third option: 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. These emission factors come from a commission-funded study, *VOC Emissions from Oil and Condensate Storage Tanks*, October 6, 2006. This proposed subparagraph contains the same requirements as §115.112(d)(5)(B) applicable in the HGB area prior to this rulemaking.

Proposed subparagraph (D) lists the fourth option available for crude oil storage only; using the chart in Exhibit 2 of the EPA 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. This proposed subparagraph contains the same requirements as §115.112(d)(5)(C) applicable in the HGB area prior to this rulemaking. The chart in Exhibit 2 of the Natural Gas Star publication is also included in the September, 2009, version of TCEQ Air Permits Division Reference Guide APDG 5942, *Calculating Volatile Organic Compounds Flash Emissions*

from Crude Oil and Condensate Tanks at Oil and Gas Production Sites.

#### Section 115.113, Alternate Control Requirements

The commission proposes non-substantive changes to §115.113 necessary to comply with current rule formatting standards.

#### Section 115.114, Inspection Requirements

The commission proposes revisions to subsection (a) that amend inspection requirements effective prior to this rulemaking in the BPA, DFW, El Paso, and HGB areas.

Proposed paragraph (1) has been reformatted to increase clarity and readability. All requirements have been maintained. Proposed paragraph (1) requires an annual inspection of an internal floating cover and its primary and secondary seal. Proposed subparagraph (A) contains the specific items requiring inspection and the requirement to repair or degas within 60 days that are currently contained in paragraph (1). Proposed subparagraph (B) contains the requirements for an owner or operator to request extensions to the repair deadline. These requirements are currently located in paragraph (1).

Proposed paragraph (2) specifies that gaps in the secondary seal of an external floating roof tank must be measured annually. The proposed paragraph contains an amendment adding §115.112(e)(2)(G) and (f)(2)(G) to the list of control requirements for a secondary seal gap measurement due to the addition of proposed §115.112(e) and (f). Proposed paragraph (2) has also been reformatted to increase clarity and readability. Proposed subparagraph (A) contains the specific items requiring inspection and the requirement to repair or degas within 60 days that are currently contained in paragraph (2). Proposed subparagraph (B) contains the requirements for an owner or operator to request extensions for repair. These requirements are currently located in paragraph (2).

Proposed paragraph (3) contains an amendment that adds §115.112(e)(2)(G) and (f)(2)(G) to the list of control requirements for a secondary seal gap limit due to the addition of proposed §115.112(e) and (f).

Proposed paragraph (4) specifies that the secondary seal of an external floating roof tank must be inspected at least every six months. The proposed paragraph contains an amendment that adds §115.112(e)(2)(F) and (G), and (f)(2)(F) and (G) to the list of control requirements for seal integrity and a secondary seal gap limit due to the addition of proposed §115.112(e) and (f). Proposed paragraph (4) has also been reformatted to increase clarity and readability. Proposed subparagraph (A) contains the specific items requiring inspection and the requirement to repair or degas within 60 days that are currently contained in paragraph (4). Proposed subparagraph (B) contains the requirements for an owner or operator to request extensions for repair. These requirements are currently located in paragraph (4).

The commission proposes to amend subsection (b) to state inspection requirements applicable in Gregg, Nueces, and Victoria Counties.

Proposed paragraph (2) specifies annual secondary seal gap measurement requirements for external floating roof tanks. This proposed paragraph has been reformatted to increase clarity and readability. Proposed subparagraph (A) contains the specific items requiring inspection and the requirement to repair or degas within 60 days that are currently contained in paragraph (2). Proposed subparagraph (B) contains the requirements for

an owner or operator to request extensions to the repair deadline. These requirements are currently located in paragraph (2).

Proposed paragraph (4) specifies annual visual inspection requirements for secondary seals on external floating roof tanks. This proposed paragraph has been reformatted to increase clarity and readability. Proposed subparagraph (A) contains the specific items requiring inspection and the requirement to repair or degas within 60 days that are currently contained in paragraph (4). Proposed subparagraph (B) contains the requirements for an owner or operator to request extensions to the repair deadline. These requirements are currently located in paragraph (4).

The commission proposes to amend subsection (c) to state inspection requirements applicable in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties. No substantive changes are proposed for any of the paragraphs of subsection (c).

#### Section 115.115, Monitoring Requirements

The commission proposes new §115.115 that contains the monitoring requirements currently located in existing §115.116 and amendments to add requirements for additional control devices as described in this Section by Section Discussion.

Proposed new subsection (a) amends requirements currently located in §115.116(a). Proposed new subsection (a) also contains requirements currently in §115.116(a)(3), specifying that an affected owner or operator shall install and maintain monitors to continuously measure operational parameters of any of the control devices listed in paragraphs of this subsection installed to meet applicable control requirements. Such monitors must be sufficient to demonstrate proper functioning of those devices to design specifications.

The commission proposes new paragraph (1) that rephrases the requirement currently located in §115.116(a)(3)(A) without substantive change to specify that for a direct-flame incinerator, the owner or operator shall continuously monitor the exhaust gas temperature immediately downstream of the device.

Proposed new paragraph (2) amends the requirement currently located in §115.116(a)(3)(B) to require continuous monitoring of the outlet gas temperature of a condensation system to ensure that the temperature is below the system manufacturer's recommended operating temperature for controlling the VOC vapors routed to the device. The commission proposes to change the word *chiller* in existing §115.116(a)(3)(B) to *condensation system* for uniformity with recent revisions in this chapter. The commission contends that a maximum temperature is necessary to ensure that the condensation system is operating at a sufficiently low temperature to assure collection of VOC vapors. The commission is requesting comments on any instances when the manufacturer would not specify an appropriate operating temperature.

Proposed new paragraph (3) specifies that an owner or operator shall monitor a carbon adsorption system according to one of the options in proposed subparagraphs (A) or (B). The proposed language in this paragraph is a clarification of the language in existing §115.116(a)(3)(C) that required continuous VOC concentration measurement to determine if breakthrough has occurred and describes that for the purposes of this rule, breakthrough is defined as a VOC concentration measured over 100 parts per million by volume (ppmv) above background expressed as methane. The 100 ppmv concentration defining breakthrough is chosen to coincide with the definition of VOC breakthrough from

a carbon adsorption system in the commission's maintenance, startup, and shutdown model permit. The proposed language provides an alternative engineering safeguard to switch the vent gas flow to fresh carbon at an interval designed to assure continuous VOC adsorption at design specifications. The proposed alternative requirement will assure protection at least equivalent to the current language since owners or operators would be required to switch to fresh carbon before the system reaches its absorption capacity rather than switching after breakthrough is detected. The commission requests comments on situations when this proposed language may be less stringent than the existing requirement.

Proposed new subparagraph (A) requires continuous monitoring of the exhaust gas VOC concentration of a carbon adsorption system to determine breakthrough. For the purpose of paragraph (3), breakthrough is defined as a measured VOC concentration exceeding 100 ppmv expressed as methane above background.

Proposed new subparagraph (B) requires the owner or operator to switch the vent gas flow to 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 adsorption system.

Proposed new paragraph (4) contains requirements currently located in existing §115.116(a)(3)(B) and specifies that for a catalytic incinerator, the owner or operator shall continuously monitor the inlet and outlet gas temperature.

Proposed new paragraph (5) specifies that the owner or operator of any stationary tank who is required to comply with §115.112(e)(3) or (f)(3) shall continuously monitor at least one of the operational parameters listed in proposed new subparagraphs (A), (B), or (C) sufficient to demonstrate proper functioning to design specifications. This requirement will only be applicable after the compliance date for §115.112(e)(3) or (f)(3) in affected areas, since compliance with the control requirement it references is only required after that date.

Proposed new subparagraphs (A) and (B) specify examples of operational parameters of a vapor recovery unit. Proposed subparagraph (A) specifies that the run-time of the compressor or motor in a vapor recovery unit is an operational parameter; proposed subparagraph (B) lists the amount of recovered vapors as another operational parameter; and proposed subparagraph (C) lists other parameters sufficient to demonstrate proper functioning to design specifications. The operational parameter in proposed subparagraph (A) will assure that a compressor or motor-driven vapor recovery unit is operating; proposed subparagraph (B) will assure that a vapor recovery unit is transferring vapors; and proposed subparagraph (C) provides flexibility for the owner or operator to identify other suitable parameters. The commission acknowledges that vapor recovery unit technology continues to evolve and chooses not to specify an operational parameter for each technology, but rather to require measurement of an appropriate operational parameter. The commission's standard permit for oil and gas sites includes examples of other parameters sufficient to demonstrate proper functioning to design specifications. The monitoring provisions for vapor recovery units claiming 95% VOC control in the oil and gas standard permit would be sufficient for the purposes of this proposed rulemaking. Specifically, a vapor recovery unit utilizing mechanical compression needs to have a sensing device set to capture the vapor at peak intervals. This device is included in the de-

sign of the equipment and no additional monitoring is required. A vapor recovery unit utilizing chemical absorption into a liquid needs to be tested to assure that the liquid is absorbing VOC vapors to at least the minimum required control efficiency. For crude oil tanks, the standard permit requires bi-weekly inlet and outlet monitoring and condensate tanks require weekly monitoring according to EPA Test Method 21 or modified Method 21 to demonstrate 95% control. The replacement of the liquid must follow manufacturer's recommended procedure. The commission requests comments on additional appropriate monitoring requirements for vapor recovery units.

Proposed new paragraph (6) specifies that one or more operational parameters of a control device not listed in subsection (a) must be measured continuously. This provision specifies uniform monitoring requirements for emerging control technologies not specifically listed in this division. Continuous monitoring is also necessary to assure consistency with monitoring requirements in effect prior to this rulemaking for other control devices listed in existing §115.116(a)(3).

Proposed new subsection (b) contains monitoring requirements currently located in §115.116(b)(3) and specifies that in Victoria County, affected persons shall continuously monitor operational parameters of any of the emission control devices listed in this subsection installed to meet applicable control requirements.

Proposed new paragraph (1) contains monitoring requirements currently located in §115.116(b)(3)(A) and lists the exhaust gas temperature immediately downstream of a direct-flame incinerator as an operational parameter requiring monitoring.

Proposed new paragraph (2) contains monitoring requirements currently located in §115.116(b)(3)(B) and lists the inlet and outlet gas temperature of a condensation system or catalytic incinerator. The commission proposes to change the word *chiller* from existing §115.116(b)(3)(B) to *condensation system* for uniformity with recent revisions in this chapter.

Proposed new paragraph (3) contains monitoring requirements currently located in §115.116(b)(3)(C) and lists the exhaust gas VOC concentration of any carbon adsorption system, as defined in §115.10, as an operational parameter requiring monitoring to determine if breakthrough has occurred.

#### *Section 115.116, Testing Requirements*

The commission proposes new subsection (a) that specifies testing requirements that begin on the compliance date in affected areas for a control device, other than a flare, that must meet a numerical control percentage requirement in §115.112(a)(3), (e)(3)(A), or (f)(3)(A).

Proposed new paragraph (1) requires an initial control efficiency demonstration.

Proposed new paragraph (2) requires that the test be conducted prior to the compliance date or within 60 days if the device is placed into service after the compliance date.

Proposed new paragraph (3) requires that the test be conducted in accordance with the approved test methods in §115.117.

Proposed new paragraph (4) requires that the device be retested within 60 days after any modification that could reasonably be expected to decrease the efficiency of a control device.

The commission is proposing to require a control efficiency demonstration; however, the proposed demonstration is intended to be a clarification of the existing requirements and is

not intended to impose any additional requirements on affected sources. Although not explicitly included in rule language, a control efficiency demonstration has been expected at least since revisions were made to this division in 1990, as stated in the February 2, 1990, issue of the *Texas Register* (15 TexReg 561). Testing already performed on existing sources and documented in accordance with test methods and recordkeeping requirements in §115.117 and §115.118 will be sufficient for this requirement. The retesting provision is necessary to demonstrate that the control device continues to meet the control efficiency requirement after modification. The commission is requesting comments on the number of days allowed to conduct the control efficiency demonstration after a substantial modification.

The commission proposes new subsection (b) specifying testing requirements for a flare used to comply with control requirements in §115.112. The proposed control requirements for flares include compliance with 40 CFR §60.18, including the design verification test. The proposed design verification test is intended to be a clarification of the existing requirements and is not intended to impose any additional requirements on affected sources. Compliance with the proposed testing provisions is not required until the compliance dates specified in §115.119. The commission contends that ample time is available for any owners or operators who have not already conducted this design verification test.

Proposed new paragraph (1) specifies that the flare must pass the design verification test required by 40 CFR §60.18(f).

Proposed new paragraph (2) requires that the test be conducted prior to the compliance date or within 60 days if the flare is placed into service after the compliance date. Properly conducted testing already performed on existing sources will be sufficient for this requirement.

#### *Section 115.117, Approved Test Methods*

The commission proposes new §115.117 specifying that all affected persons shall determine compliance with the requirements in this division by applying the test methods in §115.117 as appropriate. Proposed §115.117 consolidates redundant requirements located in existing §115.115(a) that were applicable in the BPA, DFW, El Paso, and HGB areas; requirements in existing §115.115(b) that were applicable in Gregg, Nueces, and Victoria Counties; and requirements in existing §115.115(c) that contained additional test methods applicable only in the HGB area prior to this rulemaking. In addition, the proposed language expands the applicability of the test methods from compliance with certain control requirements to compliance with all requirements in this division. The commission contends that this assures a clear statement of the necessary test method in all situations.

Proposed new paragraph (1) contains language currently located in §115.115(a)(1) and (b)(1) specifying test methods for determining flow rate.

Proposed new paragraph (2) contains language currently located in §115.115(a)(2) and (b)(2) for determining gaseous organic compound emissions.

Proposed new paragraph (3) contains language currently located in §115.115(a)(3) and (b)(3) for determining visible emissions from flares. Proposed new paragraph (3) rephrases the applicability from *visual determination of fugitive emissions from material sources and smoke emissions from flares* to *deter-*

*mination of visible emissions from flares*. Although the current language contains the title of Method 22, the proposed language more accurately depicts applications of the test method in this division.

Proposed new paragraph (4) contains language currently located in §115.115(a)(4) and (b)(4) for determining total gaseous nonmethane organic emissions.

Proposed new paragraph (5) contains language currently located in §115.115(a)(5) and (b)(5) for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis.

Proposed new paragraph (6) contains language currently located in §115.115(a)(6) and (b)(6) for measuring storage tank seal gap.

Proposed new paragraph (7) contains test methods currently located in §115.115(a)(7) and (b)(7). In addition to the consolidation, the commission proposes to paragraph (7) to add use of standard reference texts and remove the 1989 reference year in American Society for Testing and Materials Test Method D323 in order to update the reference. The commission also proposes to specify that true vapor pressure must be corrected to storage temperature according to the procedure in American Petroleum Institute Publication 2517, using the measured actual storage temperature or the maximum local monthly average ambient temperature as reported by the National Weather Service. The National Weather Service data can be obtained from the Monthly Weather Summary published for each major observation location. These data are available online after the observation month in the Monthly Weather Summary for the nearest observation location. Since the temperature of a heated storage tank differs from ambient conditions, this temperature must be determined by either the measured temperature, if available, or the set point of the heating system. The commission requests comments on the use of standard reference texts instead of test methods and situations in which use of standard reference texts would be insufficient.

Proposed new paragraphs (8) and (9) were located in existing §115.115(c) prior to this rulemaking. The commission proposes minor phrasing amendments in paragraph (8) to clarify that working, breathing, and standing emissions must be measured along with flash emissions. The commission contends that this requirement is not new since the specified devices measuring flash emissions would, in practice, also be measuring working, breathing, and standing emissions.

The commission also proposes new paragraph (10), which was not in existing §115.115, allowing use of test methods other than those specified in this section if validated by 40 CFR Part 63, Appendix A, Test Method 301 and approved by the executive director. This proposed paragraph is added to allow additional flexibility for affected owners and operators and to harmonize this section with other portions of this chapter.

Proposed new paragraph (11) contains language currently located in §115.115(a)(8), (b)(8), and (c)(8) concerning use of modified test methods.

#### *Section 115.118, Recordkeeping Requirements*

The commission proposes new §115.118 that contains recordkeeping requirements.

The commission proposes new subsection (a) that amends recordkeeping requirements currently located in existing

§115.116(a) and applicable in the BPA, DFW, El Paso, and HGB areas prior to this rulemaking.

Proposed new paragraph (1) specifies that the owner or operator of a storage tank claiming an exemption in §115.111 shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria. Where applicable, true vapor pressure, VOC content type, or a combination of the two shall be recorded initially and at every change of service, or when the storage tank is emptied and refilled. This requirement was not in existing §115.116 and is a clarification proposed to enhance enforceability of this division. Records of true vapor pressure and VOC content type of stored material are the basis for all exemptions in §115.111 that are not based on tank size, tank purpose, or construction date, and are the most commonly varying data.

Proposed new paragraph (2) contains the requirements located in existing §115.116(a)(1), that the owner or operator of any storage tank with an external floating roof that is exempt from the requirement for a secondary seal as specified in §115.111(a)(1), (6), and (7), and (d)(1), (5), and (6), and is 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. Tanks qualifying for exemptions in §115.111(a)(6) or (7) and (d)(5) or (6) must have had mechanical shoe, liquid-mounted foam, or liquid-mounted liquid filled seals installed prior to August 22, 1980, or December 10, 1982, respectively. The commission requests comments on the continued need for and phrasing of this requirement, specifically the desirability of a 1.0 psia threshold versus a 1.5 psia threshold.

Proposed new paragraph (3) contains the requirements currently located in existing §115.116(a)(2) specifying that the results of inspections required by §115.114(a) must be recorded. 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 (EIReportable) must be reported in the annual emissions inventory submittal required by §101.10. The emissions must be calculated using the methodology described in the equation and explanation of this paragraph.

Proposed new paragraph (3) contains the equation to calculate EIReportable. This is a reformatting of the method currently located in existing §115.116(a)(2)(A) - (J) designed to increase clarity and is not intended to change the calculation method. The commission solicits comments on whether or not this reformatting replicates the existing language. Explanations of the variables follow the equation.

Proposed new paragraph (4) contains rephrasing of the requirements currently located in existing §115.116(a)(3) that specify recordkeeping requirements for operational parameters of certain specified control devices installed to meet applicable control requirements. Such records must be sufficient to demonstrate proper functioning of those devices to design specifications.

Proposed new subparagraph (A) rephrases the requirement currently located in existing §115.116(a)(3)(A) to specify that for a direct-flame incinerator, the owner or operator shall continuously record the exhaust gas temperature immediately downstream of the device.

Proposed new subparagraph (B) expands upon some of the language currently located in existing §115.116(a)(3)(B). The former description for the control device was a chiller. The commission proposes to use the phrase *condensation system* to describe this equipment in order to maintain consistency with other portions of this chapter. The proposed language requires continuous recording of the outlet gas temperature of a condensation system to ensure that the temperature is below the system manufacturer's recommended operating temperature for controlling the VOC vapors routed to the device. The commission is requesting comments on the appropriate operating temperature for a condensation system and any instances when the manufacturer would not specify an appropriate operating temperature.

Proposed new subparagraph (C) expands upon some of the language currently located in existing §115.116(a)(3)(C) by specifying owners or operators using a carbon adsorption system shall maintain records of the system operation specified in clause (i) or (ii). Proposed new clause (i) requires the owner or operator to continuously record the exhaust gas VOC concentration of any carbon adsorption system monitored according to §115.115(a)(3)(A). Proposed new clause (ii) requires the owner or operator to record the date and time each carbon container is used if the carbon adsorption system is switched on a predetermined interval according to §115.115(a)(3)(B). The proposed language of subparagraph (C) is a clarification of the existing language that required continuous VOC concentration recording to determine if breakthrough has occurred because the option in §115.115(a)(3)(B) to switch the vent gas flow is designed to occur prior to breakthrough. The commission requests comments on situations when this proposed language is less stringent.

Proposed new subparagraph (D) contains some of the language currently located in existing §115.116(a)(3)(B) and specifies that for a catalytic incinerator, the owner or operator shall continuously record the inlet and outlet gas temperature.

Proposed new paragraph (5) specifies that the owner or operator of any stationary tank, reservoir, or container required to comply with the control requirements of §115.112(e)(3) or (f)(3) shall continuously record operational parameters of a vapor recovery unit monitored according to §115.115(a)(5) or (6) or a control device not listed in §115.115(a). The commission requests comments on the frequency and method of recording.

Proposed new paragraph (6) amends the requirements currently located in existing §115.116(a)(4) to specify that the results of any testing conducted in accordance with the provisions specified in §115.117 must be maintained at an affected site. A provision is proposed to allow off-site record storage under the condition that such records must be made available within 24 hours. This provides operational flexibility to owners or operators with unstaffed locations not equipped for record storage.

Proposed new paragraph (7) amends the language currently located in existing §115.116(a)(5) and specifies that all records must be maintained for two years and be made available for review upon request by authorized representatives of the executive director, the EPA, or any local air pollution control agency with jurisdiction. In the DFW area, any records created on or after two years prior to the compliance date, must be maintained for at least five years. The proposed language extends the record retention time from two years to five years starting with records that would be two years old on the compliance date of the proposed rule. The commission requests comments on record retention time and the transition between current and expanded requirements.

Proposed new subsection (b) contains language located in existing §115.116(b) specifying the recordkeeping requirements in effect in Gregg, Nueces, and Victoria Counties.

Proposed new paragraphs (1) - (5) contain the recordkeeping portions of requirements currently located in existing §115.116(b)(1) - (5) without revision except for updating references to the proposed new rules. The commission requests comments on the requirement in paragraph (1) for storage tanks exempt from a secondary seal requirement as specified in §115.111(b)(1), (6), and (7) to keep records of stored VOC with vapor pressure over 1.0 psia. Tanks qualifying for exemptions in §115.111(b)(6) or (7) must have had mechanical shoe, liquid-mounted foam, or liquid-mounted liquid filled seals installed prior to August 22, 1980, or December 10, 1982, respectively.

Proposed new subsection (c) contains the recordkeeping requirements currently located in existing §115.116(c) and expands them from the HGB area to the DFW area beginning on the compliance date specified in §115.119(c).

Proposed new paragraph (1) amends language currently located in existing §115.116(c)(1) and specifies that 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, floating cover, vapor recovery system, vapor recovery unit, or other control device, as specified in either Table I(a) or Table II(a) of §115.112(a)(1), Table 1 or Table 2 of §115.112(e)(1), or Table f1 or Table f2 of §115.112(f)(1) 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 storage capacity of 25,000 gallons or less storing volatile organic liquids other than crude oil or condensate, or to storage tanks with storage capacity of 40,000 gallons or less storing crude oil or condensate. The commission proposes to add references to Tables 1 and 2 of proposed §115.112(e)(1) and Tables f1 and f2 of proposed §115.112(f)(1) to include all applicable control requirements. These records are necessary to document that material stored in fixed roof tanks meets the criteria for exemption from control requirements.

Proposed new paragraph (2) amends language currently located in existing §115.116(c)(2) and specifies that 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 recovery unit or other device that recovers VOC vapors shall maintain records of the estimated annual uncontrolled emissions from the storage. 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 any local air pollution control agency with jurisdiction. The commission intends for this requirement to document that the entity is not required to install a vapor recovery unit or a control device because the entity is below an applicability threshold for VOC emissions. The proposed addition to the former language lists both vapor recovery units that transfer VOC and other control devices so this recordkeeping requirement mirrors the corresponding control requirement. Records must be sufficient to allow investigators to determine whether emissions have been calculated by an appropriate method. If a computer simulation is used, records of the input and output must be retained.

#### *Section 115.119, Compliance Schedules*

The commission proposes minor, non-substantive changes to subsections (a) and (b) including a statement of the language in §115.930 instead of a reference in subsection (a).

The commission proposes subsection (c) to specify that the compliance date for new requirements in the DFW area will be December 1, 2012, and that compliance with §115.112(a) will no longer be applicable after that date, but that compliance with §§115.114(a), 115.115(a), and 115.118(a) is still required.

Proposed paragraph (1) specifies that compliance with these requirements is not required until the next time the storage tank is emptied or degassed but no later than December 1, 2021, if emptying and degassing the tank is required. Additional emissions that would arise from emptying and degassing a tank could negate the benefit of the emission controls and therefore would not be required solely for the purpose of installing controls. Because tanks are generally taken out of service at least once every ten years, the controls must be installed no later than ten years from the date these rules are adopted. The delay in compliance would apply only to the installation of equipment; monitoring and recordkeeping requirements must be observed beginning December 1, 2012. Regulated entities that use the delay of compliance provision should be prepared to justify why tank emptying and degassing was necessary to comply with the rules.

The commission proposes to reletter existing subsection (c) as proposed subsection (d). Proposed subsection (d) specifies requirements that have applied in the HGB area since January 1, 2009.

Proposed subsection (e) specifies that §115.112(d) will no longer be applicable in the HGB area as of December 1, 2012. It specifies that §§115.114(a), 115.115(a), and 115.118(a) and (c) will continue to be applicable. It also specifies that the compliance date for new requirements in §115.112(e) and §115.116 will be December 1, 2012. Compliance with requirements that would require emptying and degassing a storage tank is not required until the next emptying and degassing event or January 1, 2017, except for tanks under 210,000 gallons storing crude oil or condensate prior to custody transfer that must comply with new requirements by December 1, 2012. Additional emissions that would arise from emptying and degassing a tank could negate the benefit of the emission controls and therefore would not be required solely for the purpose of installing controls. Because tanks are generally taken out of service at least once every ten years, the controls must be installed no later than ten years from the date these rules are adopted. The delay in compliance would apply only to the installation of equipment; monitoring and recordkeeping requirements must be observed beginning December 1, 2012. Regulated entities that use the delay of compliance provision should be prepared to justify why tank emptying and degassing was necessary to comply with the rules.

Proposed subsection (f) specifies that §§115.114(a), 115.115(a), and 115.118(a) will continue to be applicable in the BPA area. It also specifies that the compliance date for §115.116 will be December 1, 2012.

Proposed subsection (g) specifies that §§115.114(a), 115.115(a), and 115.118(a) will continue to be applicable in El Paso County. It also specifies that the compliance date for §115.116 will be December 1, 2012.

The commission proposes subsection (h) to specify that the compliance date for §115.116(b) in Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties will be December 1, 2012.

#### Fiscal Note: Costs to State and Local Government

Nina Chamness, Analyst, Strategic Planning and Assessment, has determined that, for the first five-year period the proposed rules are in effect, no significant fiscal implications are anticipated for the agency as a result of administration or enforcement of the proposed rules. The proposed rules affect owners or operators of storage tanks located in the state. Units of state or local government do not typically own storage tanks that emit VOC, and the proposed rules will not have a fiscal impact on them.

The proposed rules amend Chapter 115 regarding the storage of VOC by clarifying existing requirements in the HGB area, including the addition of explicit testing and monitoring requirements. The proposed rules extend a more stringent version of these control requirements (along with the clarified testing, monitoring, and recordkeeping requirements) to storage tanks in the DFW area. The proposed rules also clarify definitions, reorganize requirements, include more detail to address questions and concerns raised by stakeholders, and include detail to enhance compliance with VOC storage rules. The principal intent of the proposed rules is to reduce VOC emissions in the DFW area. If adopted, the rules would be submitted as a SIP revision to the EPA.

#### *HGB Area*

In 2007, more stringent VOC storage tank regulations were implemented in the counties that make up the HGB 1997 eight-hour ozone nonattainment area. Affected counties were: Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties. The proposed rules will affect the HGB area by: requiring monitoring of vapor recovery units in the HGB 1997 eight-hour ozone nonattainment area; by adding a requirement that flares be compliant with 40 CFR §60.18; by requiring initial tests of flares; and by explicitly requiring compliance demonstration tests on control devices, other than flares or vapor recovery units, currently required to meet 90% control of emissions. The proposed rules also clarify issues raised by stakeholders regarding the operation of controls, testing, and other monitoring requirements. In addition, the proposed rules increase the categories of records that must be kept. However, increased recordkeeping is not expected to have a significant fiscal impact on the owners or operators of storage tanks.

#### *DFW Area*

The proposed rules will impose a more stringent version of the clarified HGB 1997 eight-hour ozone nonattainment area VOC storage tank rules on the DFW area with a more stringent control device efficiency because additional VOC reductions may be needed for the RFP SIP revision. Specifically, the proposed rules will require storage tank facilities in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties to comply with the revised rules by December 1, 2012.

#### *Additional Counties*

Storage tank facilities in the BPA eight-hour ozone nonattainment area and Aransas, Bexar, Calhoun, El Paso, Gregg, Hardin, Jefferson, Matagorda, Nueces, Orange, San Patricio, Travis, and Victoria Counties will be required to comply with clarified control device and flare verification demonstration by December 1, 2012.

The proposed rules will not have significant fiscal impacts on state agencies and units of local government in any of the affected counties since these entities do not typically own or operate storage tanks. Storage tanks affected by the proposed

rules are typically owned by petroleum refineries, chemical plants, gasoline storage terminal, bulk terminals storing VOC, and oil and gas production sites.

#### Public Benefits and Costs

Nina Chamness also determined that for each year of the first five years the proposed rules are in effect, the public benefit anticipated from the changes seen in the proposed rules will be improved air quality in the DFW area and other affected counties along with greater protection of the environment and public health.

The proposed rules are not expected to have a significant fiscal impact on individuals in the affected counties unless market conditions allow storage tank owners to pass any increase in operating cost to consumers.

Storage tanks can be classified as those with fixed roofs and those with floating roofs. These tanks can be found at chemical plants, petroleum refineries, gasoline storage terminals, bulk storage terminals, oil and gas production sites, and other locations. The proposed rules will have the greatest impact on owners or operators of storage tanks in the DFW area, with lesser affect on owners or operators of storage tanks in the HGB area and other affected counties.

#### *HGB Area*

Large businesses, those with 100 or more employees or more than \$6 million in annual gross receipts, that own storage tanks in the HGB 1997 eight-hour ozone nonattainment area are not expected to experience significant fiscal impact as a result of the proposed rules since control requirements were already applied to them in 2009. The proposed rules clarify the 2009 control requirements. Multiple control options are still available to storage tank owners and operators in the HGB area, and controls that are installed as a result of clarification in the proposed rules are expected to be the options that best fit the operation and minimize any cost impacts. Estimated costs presented in this section of the fiscal note are for convenience of storage tank owners or operators that may be required to install additional controls as a result of clarification of the 2009 control requirements.

The proposed rules will clarify that storage tank owners in the HGB area are required to: monitor vapor recovery units; operate flares compliant with 40 CFR §60.18; perform initial tests of flares; and perform compliance demonstration tests on control devices (other than flares or vapor recovery units) required to meet 90% control of emissions. Monitoring costs for vapor recovery units could range from \$300 for a run time meter to \$3,000 for a totalizing flow meter. These monitoring requirements should ensure that tank owners or operators are recovering additional product, the sale of which is expected to help offset the costs of the vapor recovery units. Design verification of a flare to assure compliance with 40 CFR §60.18 could cost as much as \$4,000. Retrofitting a flare by adding a flame temperature monitor to ensure compliance could cost as much as \$500 to \$1,000 per monitor. Storage tank owners in the HGB area are not expected to install flares on tanks if they have not already done so but a flare compliant with 40 CFR §60.18 sized for use at an affected site could cost up to \$60,000 with an initial testing cost of up to \$4,000. For control devices (other than flares and vapor recovery units) required to meet 90% control efficiency, compliance demonstration tests could cost as much as \$10,000 to \$15,000 per test.

#### *DFW Area*

Large businesses that own storage tanks in the DFW 1997 eight-hour ozone nonattainment area are expected to experience fiscal impacts as a result of the proposed rules. Businesses are expected to choose the options that best fit their operations and minimize any cost impacts. The proposed rules will require storage tank owners in the DFW area to: install a control device such as a vapor recovery unit or flare; monitor vapor recovery units; operate flares compliant with 40 CFR §60.18; perform initial tests of flares; and perform compliance demonstration tests on control devices (other than flares or vapor recovery units) required to meet 95% control of emissions. Installation costs for a vapor recovery unit can be as much as \$110,000, including a sensing device to capture vapors at peak intervals. Monitoring costs for vapor recovery units could be as much as \$300 to install a run time meter, \$3,000 to install a totalizing flow meter, or up to \$10,000 for a hydrocarbon analyzer plus \$50 per measurement for labor. These monitoring requirements should ensure that tank owners or operators are recovering additional product, the sale of which is expected to help offset the costs of the vapor recovery units. Initial testing of a flare to assure compliance with 40 CFR §60.18 could cost as much as \$4,000. Retrofitting a flare by adding a flame temperature monitor to ensure compliance could cost as much as \$500 to \$1,000 per monitor. Storage tank owners in the DFW area may need to install flares on tanks if they have not already done so and a flare compliant with 40 CFR §60.18 sized for use at an affected site could cost up to \$60,000 with design verification costs of up to \$4,000. For control devices (other than flares and vapor recovery units) required to meet 95% control efficiency, compliance demonstration tests could cost as much as \$10,000 to \$15,000 per test.

#### *Additional Counties*

The proposed rules will have a fiscal impact on businesses that own or operate storage tanks in Aransas, Bexar, Calhoun, El Paso, Gregg, Hardin, Jefferson, Matagorda, Nueces, Orange, San Patricio, Travis, and Victoria Counties as they comply with revised storage tank rules. If a business needs to upgrade a flare, adding a pilot flame temperature monitor to existing flares to ensure compliance with federal regulations could cost as much as \$500 to \$1,000 per flare. If not previously completed, design verification of a flare to assure compliance with 40 CFR §60.18(f) could cost as much as \$4,000.

#### *Floating Roof or Cover Tanks Storing VOC Other Than Crude Oil or Condensate*

Floating roof tanks storing VOC in the DFW area will have several options to comply with more stringent requirements under the proposed rules. Storage tank owners are expected to choose the most economically viable option for their operations; and, therefore, the proposed rules are not expected to have a significant fiscal impact on businesses with floating roof tanks. Changes contained in the proposed rules include: retrofitting tanks with required fittings and seals; retrofitting for controls on slotted guidepoles; using flares compliant with 40 CFR §60.18; using portable control devices to control VOC vapors during tank landings; performing an initial control efficiency demonstration test for certain control devices; installing vapor recovery units; and constructing additional tank capacity if a tank roof is never landed. Estimated costs to retrofit tanks with required fittings and seals are \$900 per tank. Estimated retrofits of controls on slotted guidepoles could be as much as \$10,000 per tank. Adding pilot flame temperature monitors to demonstrate existing flare compliance could cost as much as \$500 to \$1,000 per monitor. Installation of a flare compliant with 40 CFR §60.18

that is sized for use at an affected site could cost up to \$60,000. Design verification of a flare to assure compliance with 40 CFR §60.18(f) could cost as much as \$4,000. Contracted use of a portable control device to control VOC vapors during roof landings could be as much as \$25,000 per day. The proposed compliance demonstration test on a control device required to meet 95% control efficiency could cost \$10,000 - \$15,000 per test. If vapor recovery units are used, it could cost as much as \$60,000 to \$110,000 per vapor recovery unit plus the monitoring costs of \$300 for a run time meter or \$3,000 for a totalizing flow meter. If vapor recovery units are used, it is expected that product recovery would offset these types of control costs. If a decision is made to never land a tank roof, more tank capacity could be needed. Although it is not expected that this option would be used, the agency estimates that this option could cost as much as \$610,400 per tank to construct a one million gallon capacity tank.

#### *Tanks Storing Crude Oil or Condensate Prior to Custody Transfer or at a Pipeline Breakout Station*

Typically, tanks used for this purpose are fixed roof tanks or tank batteries (a grouping of fixed roof tanks). Tanks storing crude oil or condensate prior to custody transfer or at a pipeline breakout station in the DFW area are expected to experience fiscal impacts as a result of the proposed rules. However, the fiscal impact of the proposed rules is not expected to be significant for owners or operators of these tanks since the proposed rules either allow them to recover product for sale or allow owners to choose among several control options to control emissions. Storage tank owners are expected to choose the most economically viable option for their operations.

The proposed rules will require owners or operators of these tanks that have more than 25 tpy of uncontrolled VOC emissions to control these emissions by installing vapor recovery units; by using flares compliant with 40 CFR §60.18; or by using other control devices that reduce emissions by at least 95%. The proposed rules also require an initial control efficiency demonstration test for certain control devices. Adding a pilot flame temperature monitor to existing flares to demonstrate compliance with federal regulations could cost as much as \$500 to \$1,000 per flare. If a business chooses to install a flare, one compliant with 40 CFR §60.18 sized for use at an affected site could cost up to \$60,000. Design verification of a flare to assure compliance with 40 CFR §60.18(f) could cost as much as \$4,000. The proposed compliance demonstration test on a control device required to meet 95% control efficiency could cost \$10,000 - \$15,000 per test. Installation of a vapor recovery unit and necessary monitoring equipment could cost as much as \$60,000 to \$110,000 for the unit plus \$300 for a run time meter or \$3,000 for a totalizing flow meter for each vapor recovery unit. However, the costs for vapor recovery units and monitoring are expected to be offset by the sale of product recovered.

#### *Recordkeeping Requirements*

Recordkeeping requirements will also increase for storage tank owners or operators as a result of the proposed rules, but any increase in costs is not expected to be significant.

#### *Small Business and Micro-Business Assessment*

No adverse fiscal implications are anticipated for small or micro-businesses as a result of the proposed rules. Small businesses do not typically own or operate tanks of the size that might require additional costs to be incurred for controls, monitoring, and testing. If a small business does own or operate the

size and type of tank affected by the proposed rules, it can expect to incur the same costs as a large business.

#### Small Business Regulatory Flexibility Analysis

The commission has reviewed this proposed rulemaking and determined that a small business regulatory flexibility analysis is not required because the proposed rules are required to protect the environment and do not adversely affect a small or micro-business in a material way for the first five years that the proposed rules are in effect.

#### Local Employment Impact Statement

The commission has reviewed this proposed rulemaking and determined that a local employment impact statement is not required because the proposed rules do not adversely affect a local economy in a material way for the first five years that the proposed rules are in effect.

#### Draft Regulatory Impact Analysis Determination

The commission reviewed the proposed rulemaking in light of the regulatory impact analysis requirements of Texas Government Code, §2001.0225, and determined that the proposed rulemaking does not meet the definition of a "major environmental rule" as defined in that statute. A "major environmental rule" means a rule, the specific intent of which is to protect the environment or reduce risks to human health from environmental exposure, and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. Although the proposed rulemaking is intended to protect air quality in ozone nonattainment areas, it is not expected to have any material adverse effect on the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. Instead, the primary purpose of the proposed rules is to increase the level of control for VOC storage in the DFW ozone nonattainment area. The proposed rules will result in VOC reductions that will be used to demonstrate RFP toward the attainment of the 1997 eight-hour ozone standard in the DFW ozone nonattainment area. The proposed rules are also intended to clarify the rule requirements for sources in all affected areas; provide additional flexibility for affected owners or operators by allowing for the use of alternative control options; and facilitate rule enforcement. This includes a clarification that flares used to meet the requirements of this division must meet 40 CFR §60.18, including requirements to verify the design of flare and ensure that the flare flame must be lit at all times when VOC vapors are routed to the device.

Additionally, the proposed rulemaking also does not meet any of the four applicability criteria for requiring a regulatory impact analysis for a major environmental rule, which are listed in Texas Government Code, §2001.0225(a). Texas Government Code, §2001.0225, applies only to a major environmental rule, the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the agency instead of under a specific state law. FCAA, §172(c)(1) requires that the DFW SIP revision incorporate all reasonably available control measures, including all RACT, for sources of relevant pollutants. The EPA defines RACT as the

lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53761, September 17, 1979). The proposed rulemaking will implement RACT for VOC storage in the DFW area as required by FCAA, §172(c)(1).

In 2007, the stringency of the VOC storage regulations in the HGB 1997 eight-hour ozone nonattainment area was increased after results from the second Texas Air Quality Study (May 2005) indicated unreported and underreported VOC emissions from storage tanks, including flash emissions and floating roof or cover landing loss emissions. On May 23, 2007, the commission adopted revisions to the VOC storage rules in Chapter 115, Subchapter B, Division 1, specific to the HGB area to reduce these unreported and underreported VOC emissions from storage tanks. Other recent emissions inventory improvement projects, such as the Barnett Shale special inventory, have indicated that similar issues with VOC emissions from storage tanks exist in other areas subject to the VOC storage rules in Chapter 115, Subchapter B, Division 1, and that these VOC emissions are substantial. The current level of control for VOC storage required by the commission in the HGB 1997 eight-hour ozone nonattainment area has been demonstrated to be reasonably available and technologically feasible through the installation and use of controls to meet those requirements since the implementation of the 2007 rule revisions. The commission is proposing to increase the stringency of the required controls for the DFW 1997 eight-hour ozone nonattainment area. This increased stringency, as discussed in the Fiscal Note section of the preamble, is also economically feasible. Therefore, the commission is proposing that these rules be implemented as RACT for VOC storage controls in the DFW ozone nonattainment area. The proposed rulemaking will apply these more stringent VOC storage tank control requirements in the DFW area to reduce VOC emissions from storage tanks, which will result in VOC reductions that will be used to demonstrate RFP toward the attainment of the 1997 eight-hour ozone standard in the DFW ozone nonattainment area. The proposed rulemaking would also address the concerns raised by stakeholders by revising Chapter 115, Subchapter B, Division 1 by clarifying the rule requirements for sources in all affected areas; providing additional flexibility for affected owners or operators by allowing for the use of alternative control options; and facilitating rule enforcement. This includes a clarification that flares used to meet the requirements of this division must meet 40 CFR §60.18, including requirements to verify the design of flare and ensure that the flare flame must be lit at all times when VOC vapors are routed to the device.

The proposed rulemaking implements requirements of 42 United States Code (USC), §7410, which requires states to adopt a SIP that provides for the implementation, maintenance, and enforcement of the NAAQS in each air quality control region of the state. While 42 USC, §7410 generally does not require specific programs, methods, or reductions in order to meet the standard, the SIP must include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance as may be necessary or appropriate to meet the applicable requirements of this chapter (42 USC, Chapter 85, Air Pollution Prevention and Control). The provisions of the FCAA recognize that states are in the best position to determine what programs and controls are necessary or appropriate in order to meet

the NAAQS. This flexibility allows states, affected industry, and the public to collaborate on the best methods for attaining the NAAQS for the specific regions in the state. Even though the FCAA allows states to develop their own programs, this flexibility does not relieve a state from developing a program that meets the requirements of 42 USC, §7410. States are not free to ignore the requirements of 42 USC, §7410, and must develop programs to assure that their contributions to nonattainment areas are reduced so that these areas can be brought into attainment on schedule. Additionally, FCAA §172(c)(1) provides that SIPs for nonattainment areas must include "reasonably available control measures", including RACT, for sources of emissions. The proposed rules would be implemented as RACT in the DFW ozone nonattainment area.

The requirement to provide a fiscal analysis of proposed regulations in the Texas Government Code was amended by Senate Bill (SB) 633 during the 75th Legislature, 1997. The intent of SB 633 was to require agencies to conduct a regulatory impact analysis of extraordinary rules. These are identified in the statutory language as major environmental rules that will have a material adverse impact and will exceed a requirement of state law, federal law, or a delegated federal program, or are adopted solely under the general powers of the agency. With the understanding that this requirement would seldom apply, the commission provided a cost estimate for SB 633 concluding that "based on an assessment of rules adopted by the agency in the past, it is not anticipated that the bill will have significant fiscal implications for the agency due to its limited application." The commission also noted that the number of rules that would require assessment under the provisions of the bill was not large. This conclusion was based, in part, on the criteria set forth in the bill that exempted proposed rules from the full analysis unless the rule was a major environmental rule that exceeds a federal law.

As discussed earlier in this preamble, the FCAA does not always require specific programs, methods, or reductions in order to meet the NAAQS; thus, states must develop programs for each area contributing to nonattainment to help ensure that those areas will meet the attainment deadlines. Because of the ongoing need to address nonattainment issues, and to meet the requirements of 42 USC, §7410, the commission routinely proposes and adopts SIP rules. The legislature is presumed to understand this federal scheme. If each rule proposed for inclusion in the SIP was considered to be a major environmental rule that exceeds federal law, then every SIP rule would require the full regulatory impact analysis contemplated by SB 633. This conclusion is inconsistent with the conclusions reached by the commission in its cost estimate and by the Legislative Budget Board (LBB) in its fiscal notes. Since the legislature is presumed to understand the fiscal impacts of the bills it passes, and that presumption is based on information provided by state agencies and the LBB, the commission believes that the intent of SB 633 was only to require the full regulatory impact analysis for rules that are extraordinary in nature. While the SIP rules will have a broad impact, the impact is no greater than is necessary or appropriate to meet the requirements of the FCAA. For these reasons, rules adopted for inclusion in the SIP fall under the exception in Texas Government Code, §2001.0225(a), because they are required by and do not exceed, federal law, including the approved SIP. In addition, these rules do not exceed any contract between the state and a federal agency.

The commission has consistently applied this construction to its rules since this statute was enacted in 1997. Since that time, the legislature has revised the Texas Government Code, but

left this provision substantially unamended. It is presumed that "when an agency interpretation is in effect at the time the legislature amends the laws without making substantial change in the statute, the legislature is deemed to have accepted the agency's interpretation." *Central Power & Light Co. v. Sharp*, 919 S.W.2d 485, 489 (Tex. App. Austin 1995), writ denied with per curiam opinion respecting another issue, 960 S.W.2d 617 (Tex. 1997); *Bullock v. Marathon Oil Co.*, 798 S.W.2d 353, 357 (Tex. App. Austin 1990, no writ). Cf. *Humble Oil & Refining Co. v. Calvert*, 414 S.W.2d 172 (Tex. 1967); *Dudney v. State Farm Mut. Auto Ins. Co.*, 9 S.W.3d 884, 893 (Tex. App. Austin 2000); *Southwestern Life Ins. Co. v. Montemayor*, 24 S.W.3d 581 (Tex. App. Austin 2000, pet. denied); and *Coastal Indust. Water Auth. v. Trinity Portland Cement Div.*, 563 S.W.2d 916 (Tex. 1978).

The commission's interpretation of the regulatory impact analysis requirements is also supported by a change made to the Texas Administrative Procedure Act (APA) by the legislature in 1999. In an attempt to limit the number of rule challenges based upon APA requirements, the legislature clarified that state agencies are required to meet these sections of the APA against the standard of "substantial compliance." The legislature specifically identified Texas Government Code, §2001.0225, as falling under this standard. The commission has substantially complied with the requirements of Texas Government Code, §2001.0225.

As defined in the Texas Government Code, §2001.0225 only applies to a major environmental rule, the result of which is to: exceed a standard set by federal law, unless the rule is specifically required by state law; exceed an express requirement of state law, unless the rule is specifically required by federal law; exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or adopt a rule solely under the general powers of the agency instead of under a specific state law. This rulemaking action does not meet any of these four applicability requirements of a "major environmental rule." The proposed rules would be implemented as RACT for VOC storage in the DFW 1997 eight-hour ozone nonattainment area. The proposed rules would implement a more stringent level of VOC control with a lower applicability threshold and a higher control device efficiency that will result in VOC reductions that will be used to demonstrate reasonable further progress toward the attainment of the 1997 eight-hour ozone standard in the DFW ozone nonattainment area. The proposed rules would also clarify the rule requirements for sources in all affected areas; provide additional flexibility for affected owners or operators by allowing for the use of alternative control options; and facilitate rule enforcement. This includes a clarification that flares used to meet the requirements of this division must meet 40 CFR §60.18, including requirements to verify the design of flare and ensure that the flare flame must be lit at all times when VOC vapors are routed to the device. This rulemaking action does not exceed an express requirement of state law or a requirement of a delegation agreement, and was not developed solely under the general powers of the agency, but was specifically developed to meet the NAAQS established under federal law and authorized under Texas Health and Safety Code, §§382.011, 382.012, and 382.017, as well as under 42 USC, §7410(a)(2)(A).

The commission invites public comment regarding the draft regulatory impact analysis determination during the public comment period.

Takings Impact Assessment

The commission evaluated the proposed rulemaking and performed an assessment of whether Texas Government Code, Chapter 2007, is applicable. The proposed rules would be implemented as RACT in the DFW ozone nonattainment area. RACT is required by FCAA §172(c)(1) to be included in SIPs for nonattainment areas. Furthermore, the increased level of control for VOC storage that will result from the proposed rules will result in VOC reductions that will be used to demonstrate reasonable further progress toward the attainment of the 1997 eight-hour ozone standard in the DFW ozone nonattainment area. The proposed rules would also clarify the rule requirements for sources in all affected areas; provide additional flexibility for affected owners or operators by allowing for the use of alternative control options; and facilitate rule enforcement. This includes a clarification that flares used to meet the requirements of this division must meet 40 CFR §60.18, including requirements to verify the design of flare and ensure that the flare flame must be lit at all times when VOC vapors are routed to the device. Texas Government Code, §2007.003(b)(4), provides that Texas Government Code, Chapter 2007 does not apply to this proposed rulemaking because it is an action reasonably taken to fulfill an obligation mandated by federal law.

In addition, the commission's assessment indicates that Texas Government Code, Chapter 2007 does not apply to these proposed rules because this is an action that is taken in response to a real and substantial threat to public health and safety; that is designed to significantly advance the health and safety purpose; and that does not impose a greater burden than is necessary to achieve the health and safety purpose. Thus, this action is exempt under Texas Government Code, §2007.003(b)(13). The specific intent of the proposed rulemaking is to apply more stringent VOC storage tank control requirements in the DFW area to reduce VOC emissions from storage tanks. The proposed rules will result in VOC reductions that will be used to demonstrate reasonable further progress toward the attainment of the 1997 eight-hour ozone standard in the DFW ozone nonattainment area. These requirements are control measures for VOC, a precursor of ozone, and are essential for attainment and maintenance of the ozone NAAQS. The proposed rules will also clarify the rule requirements for sources in all affected areas, including clarification of the requirements for using flares as a control device under this division; provide additional flexibility for affected owners or operators by allowing for the use of alternative control options; and facilitate rule enforcement.

Consequently, the proposed rulemaking meets the exemption criteria in Texas Government Code, §2007.003(b)(4) and (13). For these reasons, Texas Government Code, Chapter 2007 does not apply to this proposed rulemaking.

#### Consistency with the Coastal Management Program

The commission reviewed the proposed rulemaking and found that the proposal is subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act, Texas Natural Resources Code, §§33.201 *et seq.*, and therefore must be consistent with all applicable CMP goals and policies. The commission conducted a consistency determination for the proposed rules in accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22 and found the proposed rulemaking is consistent with the applicable CMP goals and policies.

The CMP goal applicable to the proposed rulemaking is the goal to protect, preserve, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas (31

TAC §501.12(l)). The CMP policy applicable to the proposed rulemaking is the policy that commission rules comply with federal regulations in 40 CFR, to protect and enhance air quality in the coastal areas (31 TAC §501.32). The proposed rulemaking would not increase emissions of air pollutants and is therefore consistent with the CMP goal in 31 TAC §501.12(1) and the CMP policy in 31 TAC §501.32.

Promulgation and enforcement of these rules will not violate or exceed any standards identified in the applicable CMP goals and policies because the proposed rules are consistent with these CMP goals and policies and because these rules do not create or have a direct or significant adverse effect on any coastal natural resource areas. Therefore, in accordance with 31 TAC §505.22(e), the commission affirms that this rulemaking action is consistent with CMP goals and policies.

Written comments on the consistency of this rulemaking may be submitted to the contact person at the address listed under the SUBMITTAL OF COMMENTS section of this preamble.

#### Effects on Sites Subject to the Federal Operating Permits Program

Chapter 115 is an applicable requirement under 30 TAC Chapter 122, Federal Operating Permits Program. If the Chapter 115 rulemaking is adopted, owners or operators subject to the federal operating permit program must, consistent with the revision process in Chapter 122, upon the effective date of the rulemaking, revise their operating permit to include the proposed Chapter 115 requirements.

#### Announcement of Hearings

The commission will hold public hearings on this proposal in Arlington on July 14, 2011 at 10:00 a.m. and 6:30 p.m. in the City Council Chambers located at 101 West Abram Street; in Houston on July 18, 2011, at 6:30 p.m. in Room C at the Houston-Galveston Area Council located at 3555 Timmons; and in Austin on July 22, 2011, at 10:00 a.m. and 2:00 p.m. in Building E, Room 201S, at the commission's central office located at 12100 Park 35 Circle. The hearings are structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the hearings; however, commission staff members will be available to discuss the proposal 30 minutes prior to the hearings.

Persons who have special communication or other accommodation needs who are planning to attend the hearings should contact Sandy Wong, Office of Legal Services at (512) 239-1802. Requests should be made as far in advance as possible.

#### Submittal of Comments

Written comments may be submitted to Charlotte Horn, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at: <http://www.tceq.texas.gov/rules/ecomments.html>. File size restrictions may apply to comments being submitted via the eComments system. All comments should reference Rule Project Number 2010-025-115-EN. The comment period closes July 25, 2011. Copies of the proposed rulemaking can be obtained from the commission's Web site at <http://www.tceq.texas.gov/rules/prop.html>. For further information, please contact Dr. Robert Gifford, Air Quality Planning Section, (512) 239-3149.

### 30 TAC §§115.110 - 115.119

#### Statutory Authority

The amendments and new sections are proposed under Texas Water Code (TWC), §5.102, concerning General Powers, that provides the commission with the general powers to carry out its duties under the TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC, §5.105, concerning General Policy, that authorizes the commission by rule to establish and approve all general policy of the commission; and under Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The amendments and new sections are also proposed under THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the proper control of the state's air. The amendments and new sections are also proposed under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, that authorizes the commission to prescribe reasonable requirements for the measuring and monitoring of air contaminant emissions; and §382.021, concerning Sampling Methods and Procedures, that authorizes the commission to prescribe sampling methods. The amendments and new sections are also proposed under Federal Clean Air Act (FCAA), 42 United States Code (USC), §§7401, *et seq.*, which requires states to submit state implementation plan revisions that specify the manner in which the National Ambient Air Quality Standards will be achieved and maintained within each air quality control region of the state.

The amendments and new sections implement THSC, §§382.002, 382.011, 382.012, 382.016, 382.017, and 382.021; and FCAA, 42 USC, §§7401 *et seq.*

#### §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. [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).]

(1) 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).

(2) 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.

(3) 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.

(4) 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.

(5) 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.

(6) 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.

(7) 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 [extends] into the stored liquid.

(8) 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.

(9) 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.

(10) 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.

(11) 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.

(12) ~~[(40)]~~ 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.

(13) 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.

§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) and (9) of this subsection. In the Dallas-Fort Worth area, the exemptions in this subsection no longer apply after the date in §115.119(c) of this title (relating to Compliance Schedules).

(1) Except as provided in §115.118 of this title (relating to Recordkeeping Requirements), any 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) Storage tanks with storage capacity less than 210,000 gallons storing crude oil or condensate prior to custody transfer in the Beaumont-Port Arthur, Dallas-Fort Worth, and El Paso areas are exempt from the requirements of this division.

(3) Storage tanks with a storage capacity less than 25,000 gallons located at motor vehicle fuel dispensing facilities are 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) External floating roof storage tanks storing waxy, high pour point crude oils are exempt from any secondary seal requirements of §115.112(a) and (d) of this title (relating to Control Requirements).

(6) Any welded storage tank 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) Any 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 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) Storage tanks with storage capacity less than 1,000 gallons are exempt from the requirements of this division.

(9) Storage tanks or tank batteries in the Houston-Galveston-Brazoria area storing condensate, as defined in §101.1 of this title (relating to Definitions), with a throughput exceeding 1,500 barrels (63,000 gallons) per year are exempt from the requirement in §115.112(d)(4) or (e)(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 §115.117 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.

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

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

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

(3) Storage tanks with storage capacity less than 25,000 gallons located at motor vehicle fuel dispensing facilities are 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) External floating roof storage tanks storing waxy, high pour point crude oils are exempt from any secondary seal requirements of §115.112(b) of this title.

(6) Any 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) Any 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) Storage tanks with storage capacity less than 1,000 gallons are exempt from the requirements of this division.

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

(1) Any 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 any floating roof or cover storage tank are exempt from the provisions of §115.112(c) of this title.

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

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

(5) Storage tanks with storage capacity less than 1,000 gallons are exempt from the requirements of this division.

(d) The following exemptions apply in the Dallas-Fort Worth area as of the date in §115.119(c) of this title.

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

(2) Storage tanks with a storage capacity less than 25,000 gallons located at motor vehicle fuel dispensing facilities are exempt from the requirements of this division.

(3) A welded storage tank with a mechanical shoe primary seal that has a secondary seal from the top of the shoe seal to the storage 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.

(4) External floating roof storage tanks storing waxy, high pour point crude oils are exempt from any secondary seal requirements of §115.112(f) of this title.

(5) Any welded storage tank 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.

(6) Any 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 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.

(7) Storage tanks with storage capacity less than 1,000 gallons are exempt from the requirements of this division.

(8) Storage tanks or tank batteries storing condensate, as defined in §101.1 of this title, with a throughput exceeding 1,500 barrels (63,000 gallons) per year are exempt from the requirement in §115.112(f)(4) of this title to route flashed gases to a vapor recovery unit or control device if the owner or operator demonstrates, using 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.

§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 as of the date in §115.119(c)(2) of this title (relating to Compliance Schedules). [For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and until January 1, 2009, in the Houston/Galveston/Brazoria areas as defined in §115.10 of this title (relating to Definitions); the following requirements apply:]

(1) No person shall place, store, or hold in any storage tank [stationary tank, reservoir, or other container] any volatile organic compounds [compound] (VOC) unless the storage tank [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) 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)~~  
~~[Figure: 30 TAC §115.112(a)(1)]~~

(2) For floating roof or cover storage tanks subject to the provisions of paragraph (1) of this subsection, the following requirements apply.

(A) All openings in an internal floating cover 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 or cover is being floated off or landed on the roof or cover leg supports.

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

(D) Any roof or cover 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 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). The accumulated area of gaps that exceed 1/8 inch [~~0.32 centimeter~~] in width between the secondary seal and storage tank wall must be no greater than 1.0 square inch per foot [~~21 square centimeters perimeter~~] of tank diameter.

(3) Vapor recovery systems, as defined in §115.10 of this title, used as a control device on any storage tank [stationary tank, reservoir, or other container] 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 [For all persons] in Gregg, Nueces, and Victoria Counties. [; the following requirements shall apply:]

(1) No person shall place, store, or hold in any storage tank [stationary tank, reservoir, or other container] any VOC [volatile organic compound (VOC)], unless the storage tank [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) 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 floating roof or cover storage tanks subject to the provisions of paragraph (1) of this subsection, the following requirements ~~shall~~ apply.

(A) All openings in an internal floating cover 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 [are to]~~ be closed at all times except when the roof or cover is being floated off or landed on the roof or cover leg supports.

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

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

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

(F) For external floating roof storage tanks, secondary seals ~~must [shall]~~ 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 [~~0.32 centimeter~~] in width between the secondary seal and tank wall ~~must [shall]~~ be no greater than 1.0 square inch per foot [~~21 square centimeters/meter~~] of tank diameter.

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

(1) No person may place, store, or hold in any storage tank [stationary tank, reservoir, or other container] any VOC, other than crude oil or condensate, unless the storage tank [such container] is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere, or is designed and equipped with at least the control device specified in Table I(b) of this paragraph for VOC other than 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.  
~~Figure: 30 TAC §115.112(c)(1)  
[Figure: 30 TAC §115.112(e)(4)]~~

(2) For floating roof or cover storage tanks subject to the provisions of paragraph (1) of this subsection, the following requirements ~~shall~~ apply.

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

(B) All tank gauging and sampling devices ~~must [shall]~~ 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 [stationary tank, reservoir, or other container,] unless the storage tank [such

tank, reservoir, or other container] 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 [vapor-loss] control devices, properly maintained and operated:

(A) an internal floating cover or external floating roof, as defined in §115.10 of this title [~~relating to Definitions~~]. These control devices will [This control equipment shall] not be permitted if the VOC has a true vapor pressure of 11.0 psia or greater. All tank-gauging and tank-sampling devices must [shall] be vapor-tight, except when gauging or sampling is taking place; or

(B) a vapor recovery system as defined in §115.10 of this title [~~relating to Definitions~~]. 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.

(d) The following requirements apply [For all persons] in the Houston-Galveston-Brazoria [Houston/Galveston/Brazoria] area, as defined in §115.10 of this title [the following requirements apply beginning January 1, 2009]. The requirements in this subsection no longer apply as of the date in §115.119(e)(2) of this title.

(1) No person shall place, store, or hold in any storage tank [stationary tank, reservoir, or other container] any VOC unless the storage tank [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.

(2) For floating roof or cover storage tanks subject to the provisions of paragraph (1) of this subsection, the following requirements apply.

(A) All openings in an internal floating cover or external floating roof as defined in §115.10 of this title [~~relating to Definitions~~] 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 cover or external floating roof except for automatic bleeder vents (vacuum breaker vents), rim space vents, leg sleeves, and roof or cover 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 cover for a fixed roof support column may be equipped with a flexible fabric sleeve seal instead of a deck cover.

(D) Any roof or cover 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 internal floating cover ~~[roof]~~ tanks 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 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 with the exception of gaps that do not exceed the following specification). The accumulated area of gaps that exceed 1/8 inch [~~(0.32 centimeter)~~] in width between the secondary seal and storage tank wall must be no greater than 1.0 square inch per foot [~~(21 square centimeters per meter)~~] 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: [~~specified in clauses (i) - (vi) of this subparagraph.~~]

(i) a pole wiper and pole float that has a seal at or above the height of the pole wiper; [~~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 [A] pole wiper and a pole sleeve; [-]

(iii) an [A] internal sleeve emission control system; [-]

(iv) a retrofit [~~Retröfit~~] to a solid guidepole system; [-]

(v) a [A] flexible enclosure system; or [-]

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

(H) The floating roof or cover must be floating on the liquid surface at all times except as specified in this subparagraph. The [~~when the~~] floating roof or cover may be [~~is~~] supported by the leg supports or other support devices, such as [~~e.g.,~~] hangers from the fixed roof, [-] during the initial fill or [~~including~~] refill after the storage tank has been cleaned [~~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:~~

(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 [ø] 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 or cover is landed until the floating roof or cover is within ten percent by volume of being refloated;

(v) when all VOC emissions from the tank, including emissions from roof or cover landings, have been included in a floating roof or cover 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 or cover 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 recovery systems, as defined in §115.10 of this title, used as a control device on any storage tank [~~stationary tank, reservoir, or other container~~] must maintain a minimum control efficiency of 90%.

(4) Storage tanks storing condensate, as defined in §101.1 of this title, 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.

(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 tank, or from the aggregate of storage 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. [-]

(A) Make direct measurements [~~direct measurement~~] using the measuring instruments and methods specified in §115.117 [~~§115.115~~] of this title (relating to Approved Test Methods). [-]

(B) Use [~~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. [-]

(C) For [~~for~~] crude oil storage only, use [~~using~~] the chart in Exhibit 2 of the United States Environmental Protection Agency publication *Lessons Learned from Natural Gas Star [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. [-; ø]

(D) Other test methods or computer simulations may be allowed if [~~other test method or computer simulation~~] approved by the executive director.

(e) The control requirements in this subsection apply in the Houston-Galveston-Brazoria area as of the date in §115.119(e) of this title.

(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 equipped with at least the control device specified in either 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)

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

(A) All openings in an internal floating cover 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) 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 or cover 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.

(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 cover for a fixed roof support column may be equipped with a flexible fabric sleeve seal instead of a deck cover.

(E) Any roof or cover 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 internal floating cover tanks 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 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 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 must be no 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 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 floating roof or cover must be floating on the liquid surface at all times except as allowed in this subparagraph. The floating roof or cover 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 tank has been cleaned or as allowed under the following circumstances:

(i) when necessary for preventive maintenance, roof or cover 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;

(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;

(iv) 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 or cover is within 10% by volume of being refloated;

(v) when all VOC emissions from the tank, including emissions from floating roof or cover landings, have been included in a floating roof or cover storage tank emissions limit or cap approved under Chapter 116 of this title prior to the compliance date; or

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

(3) Control devices 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 a minimum control efficiency of at least 90%.

(B) A vapor recovery unit must be designed to process all VOC vapor generated by the maximum crude oil and condensate throughput of the storage tank 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) Storage tanks storing condensate prior to custody transfer must route flashed gases to a vapor recovery unit 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.

(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 unit or control device if the uncontrolled VOC emissions from an individual storage tank, or from the aggregate of storage 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 (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) Make direct measurements using the measuring instruments and methods specified in §115.117 of this title.

(B) Use other test methods or computer simulations approved by the executive director.

(C) 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, 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.

(f) The control requirements in this subsection apply in the Dallas-Fort Worth area as of the date in §115.119(c) of this title.

(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 equipped with at least the control device specified in either Table f1 of this paragraph for VOC other than crude oil and condensate, or Table f2 of this paragraph for crude oil and condensate. Figure: 30 TAC §115.112(f)(1)

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

(A) All openings in an internal floating cover 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) 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 or cover 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.

(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 cover for a fixed roof support column may be equipped with a flexible fabric sleeve seal instead of a deck cover.

(E) Any roof or cover 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 internal floating cover tanks 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 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 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 must be no 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 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 floating roof or cover must be floating on the liquid surface at all times except as allowed in this subparagraph. The floating roof or cover 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 tank has been cleaned or as allowed under the following circumstances:

(i) when necessary for preventive maintenance, roof or cover 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;

(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;

(iv) 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 or cover is within 10% by volume of being refloated;

(v) when all VOC emissions from the tank, including emissions from floating roof or cover landings, have been included in a floating roof or cover storage tank emissions limit or cap approved under Chapter 116 of this title prior to the compliance date; or

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

(3) Control devices 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 a minimum control efficiency of at least 95%.

(B) A vapor recovery unit must be designed to process all VOC vapor generated by the maximum crude oil and condensate throughput of the storage tank 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) Storage tanks storing condensate prior to custody transfer must route flashed gases to a vapor recovery unit 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.

(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 unit or control device if the uncontrolled VOC emissions from an individual storage tank, or from the aggregate of storage 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 (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) Make direct measurements using the measuring instruments and methods specified in §115.117 of this title.

(B) Use other test methods or computer simulations approved by the executive director.

(C) 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, 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.

#### *§115.113. Alternate Control Requirements.*

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.

*§115.114. Inspection 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). ~~[For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston/Brazoria areas, the following inspection requirements apply.]~~

(1) For internal floating cover ~~[~~roof~~]~~ storage tanks, the internal floating cover ~~[~~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 cover ~~[~~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 cover ~~[~~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 title (relating to Degassing of Storage Tanks, Transport Vessels, and Marine Vessels) [§§115.541 - 115.547 of this title (relating to Degassing or Cleansing of Stationary, Marine, and Transport 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 external floating roof storage tanks, 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), (e)(2)(G), and (f)(2)(G) ~~[and 115.112(d)(2)(F)]~~ 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), (e)(2)(G), or (f)(2)(G) ~~[or §115.112(d)(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 in accordance with Subchapter F, Division 3 [§§115.541 - 115.547] of this title.

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

(4) For external floating roof storage tanks, 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), (e)(2)(F) and (G), and (f)(2)(F) and (G) ~~[and §115.112(d)(2)(E) and (F)]~~ of this title.

(A) If the external floating roof is not resting on the surface of the VOC ~~[volatile organic compounds (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 [§§115.541 - 115.547] of this title.

(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.

(b) The following inspection requirements apply ~~[For all persons]~~ in Gregg, Nueces, and Victoria Counties~~;~~ the following inspection requirements shall apply].

(1) If during an inspection of an internal floating cover ~~[~~roof~~]~~ storage tank, the internal floating cover ~~[~~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 cover ~~[~~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. 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 ~~[shall]~~ 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 external floating roof storage tanks, the secondary seal gap shall 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 ~~[shall]~~ 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 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 external floating roof storage tanks, the secondary seal shall 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 [shall] 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 shall apply for [For] all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties[; the following inspection requirements shall apply].

(1) If during an inspection of an internal floating cover [roof] storage tank, the internal floating cover [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 cover [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. 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 [shall] 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) 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. 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 [shall] 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.

#### §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 continuously 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, the owner or operator shall:

(A) continuously monitor the exhaust gas VOC concentration of any 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 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 adsorption system.

(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) or (f)(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 continuously monitor operational parameters of any of the emission control devices listed in this subsection installed to meet applicable control requirements.

(1) Continuously monitor the exhaust gas temperature immediately downstream of a direct-flame incinerator.

(2) Continuously monitor the inlet and outlet gas temperature of a condensation system or catalytic incinerator.

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

#### §115.116. Testing Requirements.

(a) The testing requirements in this subsection apply in the Dallas-Fort Worth area as of the date in §115.119(c) of this title (relating to Compliance Schedules). The testing requirements in this subsection apply in the Houston-Galveston-Brazoria area as of the date in §115.119(e) of this title. The testing requirements in this subsection apply in the Beaumont-Port Arthur area as of the date in §115.119(f) of this title. The testing requirements in this subsection apply in the El Paso area as of the date in §115.119(g) of this title. The following requirements apply to a control device, other than a vapor recovery unit or a flare, used to comply with the control requirements in §115.112(a)(3), (e)(3)(A), and (f)(3)(A) of this title (relating to Control Requirements).

(1) An initial control efficiency test must be conducted.

(2) The test must be conducted prior to the compliance date for this subsection. Control devices placed into service after the compliance date for this subsection, must be tested no later than 60 days after being placed into service.

(3) The test must be performed in accordance with the approved test methods in §115.117 of this title (relating to Approved Test Methods).

(4) If the device is modified in any way that could reasonably be expected to decrease the efficiency of a control device, the device must be retested within 60 days of the modification.

(b) The testing requirements in this subsection apply in the Dallas-Fort Worth area as of the date in §115.119(c) of this title. The testing requirements in this subsection apply in the Houston-Galveston-Brazoria area as of the date in §115.119(e) of this title. The testing requirements in this subsection apply in the Beaumont-Port Arthur area as of the date in §115.119(f) of this title. The testing requirements in this subsection apply in the El Paso area as of the date in §115.119(g) of this title. The testing requirements in this subsection apply in Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties as of the date in §115.119(h) of this title. The following requirements apply to a flare used to comply with the control requirements in §115.112 of this title.

(1) 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)).

(2) The testing must be conducted prior to the compliance date for this subsection. Flares placed into service after the compliance date for this subsection, must be tested no later than 60 days after being placed into service.

#### §115.117. Approved Test Methods.

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

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

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

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

(7) true vapor pressure must be determined using standard reference texts or American Society for Testing and Materials Test Method D323, 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. For the purposes of temperature correction, the owner or operator shall use the actual storage temperature. Actual storage temperature of an unheated tank or vessel may be determined using the maximum local monthly average ambient temperature as reported by the National Weather Service. Actual storage temperature of a heated tank or vessel must be determined using either the measured temperature or the temperature set point of the tank or vessel;

(8) 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;

(9) test methods referenced in paragraphs (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 volatile organic compounds in flashed gases from crude oil and condensate storage;

(10) 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

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

#### §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 any storage tank with an external floating roof that is exempt from the requirement for a secondary seal as specified in §115.111(a)(1), (6), and (7) and (d)(1), (5), and (6) 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 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)

(4) The owner or operator shall continuously 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.

(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 tem-

perature is below the manufacturer's recommended operating temperature for controlling the VOC vapors routed to the device.

(C) For a carbon adsorption system, 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 (relating to Monitoring Requirements); or

(ii) record the date and time of each switch between carbon containers if the carbon adsorption system 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.

(5) The owner or operator of any storage tank required to comply with §115.112(e)(3) or (f)(3) of this title (relating to Control Requirements) shall continuously record the operational parameters of a vapor recovery unit or other control device not listed in §115.115(a) of this title monitored according to §115.115(a)(5) or (6).

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

(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 two years prior to the date in §115.119(c) of this title (relating to Compliance Schedules) 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 any storage vessel with an external floating roof which is exempted from the requirement for a secondary seal as specified in §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. 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, as defined in §115.10 of this title, to determine if breakthrough has occurred.

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

(5) All records shall 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.

(c) The following recordkeeping requirements apply in the Houston-Galveston-Brazoria area in addition to those specified in subsection (a) of this section. Beginning on the date in §115.119(c) of this title, these requirements also apply in the Dallas-Fort Worth area.

(1) The owner or operator of any storage tank with a fixed roof that is not required to be equipped with a floating roof, floating cover, vapor recovery unit, or other control device, as specified in either Table I(a) or Table II(a) of §115.112(a)(1) of this title; or Table 1 or Table 2 of §115.112(e)(1) of this title; or Table f1 or Table f2 of §115.112(f)(1) of this title, 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 storage capacity of 25,000 gallons or less storing VOC other than crude oil or condensate, or to storage tanks with storage capacity of 40,000 gallons or less storing crude oil or condensate.

(2) The owner or operator of any storage tank that stores crude oil or condensate prior to custody transfer or at a pipeline break-out station and is not equipped with a vapor recovery unit or other control device shall maintain records of the estimated annual uncontrolled emissions from the storage tank. 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 United States Environmental Protection Agency, or any local air pollution control agency with jurisdiction.

#### §115.119. [~~Counties and~~] Compliance Schedules.

(a) The owner or operator of each storage tank [~~stationary tank, reservoir, or other container~~] in which any volatile organic compounds [~~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 as of the original compliance date which is in the past. [~~(relating to Storage of Volatile Organic Compounds) as required by §115.930 of this title (relating to Compliance Dates).~~]

(b) The owner or operator of each storage tank [~~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.

(c) The owner or operator of each storage tank in which any VOC is placed, stored, or held in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties shall comply with §§115.112(f), 115.116, and 115.118(c) of this title (relating to Control Requirements; Testing Requirements; and Recordkeeping Requirements, respectively) no later than December 1, 2012.

(1) 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 or degassed but no later than December 1, 2021.

(2) The owner or operator is no longer required to comply with §115.112(a) of this title as of December 1, 2012.

(3) The owner or operator shall continue to comply with §§115.114(a), 115.115(a), 115.118(a) of this title (relating to Inspection Requirements; Monitoring Requirements; and Recordkeeping Requirements, respectively).

(4) 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 December 1, 2012, regardless if compliance with these requirements would require emptying and degassing of the storage tank.

(d) [(e)] The owner or operator of each storage tank [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 requirements of §§115.112(d), 115.115(a), 115.117, and 115.118(a) [115.115(e), and 115.116(e)] of this title (relating to Control Requirements; Monitoring Requirements; Approved Test Methods; and [Monitoring and] Recordkeeping Requirements, respectively) [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 or 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.]

(1) 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 or degassed but no later than January 1, 2017.

(2) 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.

(e) The owner or operator of each storage tank in which any VOC is placed, stored, or held in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall comply with §115.112(e) and §115.116 of this title no later than December 1, 2012.

(1) 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 or degassed but no later than January 1, 2017.

(2) The owner or operator is no longer required to comply with §115.112(d) of this title as of December 1, 2012.

(3) The owner or operator shall continue to comply with §§115.114(a), 115.115(a), and 115.118(a) and (c) of this title.

(4) 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 December 1, 2012, regardless if compliance with these requirements would require emptying and degassing of the storage tank.

(f) The owner or operator of each storage tank in which any VOC is placed, stored, or held in Hardin, Jefferson, and Orange Counties shall continue to comply with §§115.114(a), 115.115(a), and 115.118(a) of this title and shall comply with §115.116 of this title no later than December 1, 2012.

(g) The owner or operator of each storage tank in which any VOC is placed, stored, or held in El Paso County shall continue to comply with §§115.114(a), 115.115(a), and 115.118(a) of this title and shall comply with §115.116 of this title no later than December 1, 2012.

(h) The owner or operator of each storage tank in which any VOC is placed, stored, or held in Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties shall comply with the requirements of §115.116(b) of this title no later than December 1, 2012.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's legal authority to adopt.

Filed with the Office of the Secretary of State on June 10, 2011.

TRD-201102110

Robert Martinez

Director, Environmental Law Division

Texas Commission on Environmental Quality

Earliest possible date of adoption: July 24, 2011

For further information, please call: (512) 239-0779

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**30 TAC §§115.115 - 115.117**

*(Editor's note: The text of the following sections proposed for repeal will not be published. The sections may be examined in the offices of the Texas Commission on Environmental Quality or in the Texas Register office, Room 245, James Earl Rudder Building, 1019 Brazos Street, Austin, Texas.)*

**Statutory Authority**

The repeals are proposed under Texas Water Code (TWC), §5.102, concerning General Powers, that provides the commission with the general powers to carry out its duties under the Texas Water Code; TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC, §5.105, concerning General Policy, that authorizes the commission by rule to establish and approve all general policy of the commission; and under THSC, §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The repeals are also proposed under THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the proper control of the state's air. The repeals are also proposed under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, that authorizes the commission to prescribe reasonable requirements for the measuring and monitoring of air contaminant emissions; and §382.021, concerning Sampling Methods and Procedures, that authorizes the commission to prescribe sampling methods. The repeals are also proposed under FCAA, 42 USC, §§7401, *et seq.*, which requires states to submit SIP revisions that specify the manner in which the NAAQS will be achieved and maintained within each air quality control region of the state.

The proposed repeals implement THSC, §§382.002, 382.011, 382.012, 382.016, 382.017, 382.021, and FCAA, 42 USC, §§7401 *et seq.*

§115.115. *Approved Test Methods.*

§115.116. *Monitoring and Recordkeeping Requirements.*

§115.117. *Exemptions.*

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's legal authority to adopt.

Filed with the Office of the Secretary of State on June 10, 2011.

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Robert Martinez

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Texas Commission on Environmental Quality

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For further information, please call: (512) 239-0779



## SUBCHAPTER E. SOLVENT-USING PROCESSES

The Texas Commission on Environmental Quality (commission) proposes the repeal of §115.437; amendments to §§115.422, 115.427, 115.429, 115.430, 115.432, 115.433, 115.435, 115.436, and 115.439; and new §§115.431, 115.450, 115.451, 115.453 - 115.455, 115.458 - 115.461, 115.463 - 115.465, 115.468 - 115.471, 115.473 - 115.475, 115.478, and 115.479.

If adopted, the repealed, amended, and new sections will be submitted to the United States Environmental Protection Agency (EPA) as revisions to the state implementation plan (SIP).

### Background and Summary of the Factual Basis for the Proposed Rules

The 1990 Federal Clean Air Act (FCAA) Amendments (42 United States Code (USC), §§7401 *et seq.*) require the EPA to establish primary National Ambient Air Quality Standards (NAAQS) that protect public health and to designate areas exceeding the NAAQS as nonattainment areas. For each designated nonattainment area, the state is required to submit a SIP revision to the EPA that provides for attainment and maintenance of the NAAQS.

FCAA, §172(c)(1) requires that the SIP incorporate all reasonably available control measures, including reasonably available control technology (RACT), for sources of relevant pollutants. The EPA defines RACT as the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53761, September 17, 1979). For nonattainment areas classified as moderate and above, FCAA, §182(b)(2) requires the state to submit a SIP revision that implements RACT for sources of volatile organic compounds (VOC) addressed in a control techniques guidelines (CTG) document issued between November 15, 1990, and the area's attainment date.

The CTG documents provide information to assist states and local air pollution control authorities in determining RACT for specific emission sources. The CTG documents describe the EPA's evaluation of available information, including emission control options and associated costs, and provide the EPA's

RACT recommendations for controlling emissions from these sources. The CTG documents do not impose any legally binding regulations or change any applicable regulations. The EPA's guidance on RACT indicates that states can choose to implement the CTG recommendations, implement an alternative approach, or demonstrate that additional control for the CTG emission source category is not technologically or not economically feasible in the area.

FCAA, §183(e) directs the EPA to regulate VOC emissions from certain consumer and commercial product categories by issuing national regulations or by issuing CTG documents in lieu of regulations. The EPA published CTG documents in lieu of national regulations for VOC emissions in 2006 from Industrial Cleaning Solvents (EPA 453/R-06-001) and Flexible Package Printing (EPA 453/R-06-003); in 2007 from Paper, Film, and Foil Coatings (EPA 453/R-07-003), Large Appliance Coatings (EPA 453/R-07-004), and Metal Furniture Coatings (EPA 453/R-07-005); and in 2008 from Miscellaneous Metal and Plastic Parts Coatings (EPA-453/R-08-003), Miscellaneous Industrial Adhesives (EPA-453/R-08-005), and Automobile and Light-Duty Truck Assembly Coatings (EPA-453/R-08-006).

### *Flexible Package Printing CTG, Group II Issued in 2006*

The proposed rules include restricting the VOC content limits of materials, increasing the overall control efficiency of add-on controls used in flexible package printing operations, and establishing work practice procedures for associated cleaning activities. Additionally, the proposed rules would expand rule applicability beginning March 1, 2013, to include flexible package printing lines that were previously exempt from these rules.

The commission is not proposing to implement the EPA's 2006 Flexible Package Printing CTG recommendation to exempt flexible package printing operations from all VOC coating content limits if the operations have total actual VOC emissions less than 15 pounds per day from inks, coatings, and adhesives. For the Houston-Galveston-Brazoria 1997 eight-hour ozone nonattainment area (HGB area) (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties), the existing Chapter 115 rules provide an exemption for combined flexographic and rotogravure printing operations with the potential to emit less than 25 tons per year (tpy) of VOC from inks. For the Dallas-Fort Worth 1997 eight-hour ozone nonattainment area (DFW area) (Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties), the existing Chapter 115 rules provide an exemption for combined flexographic and rotogravure printing operations with the potential to emit less than 50 tpy of VOC emissions from inks. Calculating only the VOC emissions resulting from flexible package printing operations to determine exemption from the required controls may create backsliding issues for properties already complying with the current Chapter 115 rules. The existing Chapter 115 exemption limit is equal to or potentially more stringent than the 2006 CTG-recommended exemption threshold for properties conducting multiple flexographic and rotogravure printing operations and is retained in the proposed rules.

Additionally, the commission is not proposing to implement the EPA's 2006 CTG recommendation to exempt a flexible package printing line from complying with VOC coating content limits if the line has the potential to emit less than 25 tpy of uncontrolled VOC emissions from the dryer, from inks, coatings, and adhesives. As previously stated, the current Chapter 115 rules require combining the VOC emissions from all flexographic and rotogravure printing lines to determine exemption from the VOC

Figure: 30 TAC §115.112(a)(1)

**Table I(a): Required Control for Storage Tanks 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 recovery system
≥1.5 psia and < 11 psia	> 25,000 gal and ≤ 40,000 gal	Internal floating cover, or External floating roof (any type), or Vapor recovery system
≥1.5 psia and < 11 psia	> 40,000 gal	Internal floating cover, or External floating roof with primary seal (any type) and secondary seal, or Vapor recovery system
≥11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe or Vapor recovery system
≥11 psia	> 25,000 gal	Submerged fill pipe and Vapor recovery system

**Table II(a): Required Control for Storage Tanks 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 recovery system
≥1.5 psia and < 11 psia	> 40,000 gal	Internal floating cover, or External floating roof with primary seal (any type) and secondary seal, or Vapor recovery system
≥11 psia	> 1,000 gal and ≤ 40,000 gal	Submerged fill pipe or Vapor recovery system
≥11 psia	> 40,000 gal	Submerged fill pipe and Vapor recovery system

Figure: 30 TAC §115.112(c)(1)

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

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

Figure: 30 TAC §115.112(e)(1)

**Table 1: Required Control for Storage Tanks Storing Volatile Organic Compounds (VOC) Other Than Crude Oil and Condensate**

<b>True Vapor Pressure (pounds per square inch absolute (psia))</b>	<b>Storage Capacity (gallon (gal))</b>	<b>Control Requirements</b>
≥1.5 psia and < 11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe, or Vapor recovery unit, or Control device
≥1.5 psia and < 11 psia	> 25,000 gal and ≤ 40,000 gal	Internal floating cover, or External floating roof (any type), or Vapor recovery unit, or Control device
≥1.5 psia and < 11 psia	> 40,000 gal	Internal floating cover, or External floating roof with primary seal (any type) and secondary seal, or Vapor recovery unit, or Control device
≥11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe, or Vapor recovery unit, or Control device
≥11 psia	> 25,000 gal	Submerged fill pipe and Either a vapor recovery unit or a control device

**Table 2: Required Control for Storage Tanks 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 recovery unit, or Control device
≥1.5 psia and < 11 psia	> 40,000 gal	Internal floating cover, or External floating roof with primary seal (any type) and secondary seal, or Vapor recovery unit, or Control device
≥11 psia	> 1,000 gal and ≤ 40,000 gal	Submerged fill pipe, or Vapor recovery unit, or Control device
≥11 psia	> 40,000 gal	Submerged fill pipe and Either a vapor recovery unit or a control device

Figure: 30 TAC §115.112(f)(1)

**Table f1: Required Control for Storage Tanks 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 recovery unit, or Control device
≥1.5 psia and < 11 psia	> 25,000 gal and ≤40,000 gal	Internal floating cover, or External floating roof (any type), or Vapor recovery unit, or Control device
≥1.5 psia and < 11 psia	> 40,000 gal	Internal floating cover, or External floating roof with primary seal (any type) and secondary seal, or Vapor recovery unit, or Control device
≥11 psia	> 1,000 gal and ≤25,000 gal	Submerged fill pipe, or Vapor recovery unit, or Control device
≥11 psia	> 25,000 gal	Submerged fill pipe and Either a vapor recovery unit or a control device

**Table f2: Required Control for Storage Tanks 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 recovery unit, or Control device
≥1.5 psia and < 11 psia	> 40,000 gal	Internal floating cover, or External floating roof with primary seal (any type) and secondary seal, or Vapor recovery unit, or Control device
≥11 psia	> 1,000 gal and ≤ 40,000 gal	Submerged fill pipe, or Vapor recovery unit, or Control device
≥11 psia	> 40,000 gal	Submerged fill pipe and Either a vapor recovery unit or a control device

Figure: 30 TAC 115.118(a)(3)

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

Where:

$E_{1\text{Seal}}$  = The AP-42 estimate of emissions from a floating roof or floating cover 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.

$E_{2\text{Seals}}$  = The AP-42 estimate of emissions from a floating roof or floating cover 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.

$G_{8\text{thL}}$  = 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.