

◆ ◆ ◆
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) adopts the amendments to §§115.110, 115.112 - 115.114, and 115.119; repeal of §§115.115 - 115.117; and new §§115.111 and 115.115 - 115.118.

Amended §§115.112, 115.114, and 115.119 and new §§115.111 and 115.115 - 115.118 are adopted *with changes* to the proposed text as published in the June 24, 2011, issue of the *Texas Register* (36 TexReg 3801). Sections 115.110 and 115.113 and the repeal of §§115.115 - 115.117 are adopted *without changes* to the proposed text and will not be republished.

The amended, repealed, and new sections will be submitted to the United States Environmental Protection Agency (EPA) as revisions to the state implementation plan (SIP).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 Adopted 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 1997 eight-hour ozone nonattainment area (HGB area), including emissions from tanks storing crude oil and condensate prior to custody transfer and floating roof landing loss emissions. The commission estimated 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 revised the VOC storage rules in Chapter 115, Subchapter B, Division 1 to reduce these unreported and underreported VOC emissions from storage tanks in the HGB area (June 8, 2007, issue of the *Texas Register* (32 TexReg 3178)).

On April 30, 2004, the Dallas-Fort Worth 1997 eight-hour ozone nonattainment area (DFW area), consisting of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties, was designated a moderate nonattainment area for the 1997 eight-hour ozone National Ambient Air Quality Standards (NAAQS), with a June 15, 2010, attainment deadline. Effective January 19, 2011, the EPA finalized a determination

that the DFW area did not attain the 1997 eight-hour ozone standard by the June 15, 2010, deadline, and reclassified the DFW area to serious with a June 15, 2013, attainment deadline (75 FR 79302, December 20, 2010). Because of the reclassification, the state is required to submit an attainment demonstration SIP revision that addresses the 1997 eight-hour ozone standard serious nonattainment area requirements by January 19, 2012. Federal Clean Air Act (FCAA), §172(c)(1) and §182(b)(2) require the attainment demonstration SIP revision to provide for the implementation of reasonably available control technology (RACT) requirements for all major stationary sources of emissions and all emission source categories addressed in an EPA-issued control techniques guidelines (CTG) document. The EPA defines RACT as the lowest emission limit 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 primary purpose of this rulemaking is to implement RACT requirements for VOC storage tanks in the DFW area. The commission is adopting additional requirements in Chapter 115, Subchapter B, Division 1 for low-leaking storage tank fittings and to limit situations when a floating roof storage tank is allowed to emit VOC because the roof is not floating on the liquid. Although this rulemaking implements FCAA RACT requirements for the petroleum liquid storage CTG emission source category, these rules are more stringent than the EPA's RACT recommendations for these sources (EPA Document Numbers EPA-450/2-77-036, EPA-450/2-78-047, and EPA-453/R-94-001). The commission's Point Source Emissions Inventory and recent emissions inventory improvement projects, including Phase II of the Barnett Shale Special Emissions Inventory, indicate there are storage tanks in the DFW area with VOC emissions that exceed the 50 tons per year (tpy) major source threshold for serious nonattainment areas. The adopted rules also require 95% control of VOC flash emissions from tanks storing crude oil and condensate prior to custody transfer with uncontrolled VOC emissions that equal or exceed 50 tpy. The commission is adopting this requirement to fulfill FCAA RACT requirements for major stationary sources in serious nonattainment areas. The adopted control requirements are technologically and economically feasible and therefore represent RACT for the storage of VOC.

The commission is requiring 95% control of VOC emissions from storage tanks in the DFW area. Although this requirement is more stringent than the 90% control level currently required in the HGB area, the commission has determined that it is technologically and economically feasible to achieve 95% control of VOC emissions from these sources. The 95% control requirement is consistent with limits on floating roof storage tanks in the Refinery Maintenance, Startup, and Shutdown Model Permit and with requirements in 40 Code of Federal Regulations (CFR) Part 60, Subpart Kb, the applicable federal New Source Performance Standard (NSPS) for storage tanks constructed after 1984. Additionally, a 2010 survey study (TCEQ Project 2010-43) found that all responding upstream oil and gas sources in the HGB area chose to install vapor recovery units or flares to comply with the Chapter 115, Subchapter B, Division 1 requirements. The installation of these technologies when controls are required in the HGB area demonstrates their technological and economic feasibility. To ensure that flares and vapor recovery units installed to comply with these Chapter 115 requirements maintain at least 95% control efficiency, the commission requires flares to be designed and operated in compliance with 40 CFR §60.18

and specifies design and operational parameters for vapor recovery units consistent with the requirements in paragraphs (a) - (k) of the TCEQ Air Quality Standard Permit for Oil and Gas Handling and Production Facilities applicable in counties of the Barnett Shale formation.

The commission proposed to control flash emissions from crude oil and condensate storage tanks, prior to custody transfer, in the DFW area with uncontrolled VOC emissions that equal or exceed 25 tpy. At proposal, the commission determined that it was both technologically and economically feasible to control flash emissions from crude oil and condensate storage tanks, prior to custody transfer, in the DFW area. The 25 tpy threshold was proposed because preliminary analysis indicated that additional VOC reductions, beyond those reductions achieved from controlling flash emissions from major sources with uncontrolled VOC emissions that equal or exceed 50 tpy, were necessary to help meet FCAA Reasonable Further Progress (RFP) requirements. The commission has since determined that these additional VOC emission reductions are not necessary to meet RFP requirements. However, the requirements of FCAA, §182 regarding RACT must be fulfilled. Therefore, the adopted requirements to control flash emissions from crude oil and condensate storage tanks, prior to custody transfer, in the DFW area apply to major sources with uncontrolled VOC emissions that equal or exceed 50 tpy.

While the adopted rule only applies the emission control requirements to crude oil and condensate tanks prior to custody transfer in the DFW area with uncontrolled VOC emissions that equal or exceed 50 tpy, the commission is also adopting a provision in §115.119(b)(1)(C) that specifies if the commission publishes notice in the *Texas Register* that the DFW area has been reclassified as severe for the 1997 eight-hour ozone standard, the control requirements for flash emissions will apply to major sources with uncontrolled VOC emissions that equal or exceed 25 tpy. Once the commission publishes notice in the *Texas Register*, affected sources will have 15 months to comply with these control requirements. The commission is adopting this provision in §115.119(b)(1)(C) to avoid a duplicative demonstration of the technological and economic feasibility of controlling flash emissions from crude oil and condensate storage tanks, prior to custody transfer, in the DFW area with uncontrolled VOC emissions that equal or exceed 25 tpy. The commission has determined these requirements represent RACT for major sources. The photochemical modeling and corroborative analyses show the DFW area will attain the 1997 eight-hour ozone standard in 2012. However, if in the future the DFW area were reclassified to severe for the 1997 eight-hour ozone standard, the commission would be required to implement RACT for major stationary sources with the potential to emit at least 25 tpy. Because the commission has already determined the controls are feasible at the 25 tpy VOC threshold and provided adequate notice with the proposal of this rulemaking, the provision in §115.119(b)(1)(C) will enable the commission to implement RACT for this category of sources at the 25 tpy threshold expeditiously without the need for duplicative rulemaking should the area be reclassified to severe nonattainment in the future.

The rulemaking also addresses concerns raised by stakeholders by revising Chapter 115, Subchapter B, Division 1 to clarify and add specificity to the rule requirements for sources in all affected areas, including the DFW and HGB areas, the Beaumont-Port Arthur 1997 eight-hour ozone maintenance area (BPA), and Aransas, Bexar, Calhoun, El Paso, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties. The commission is

adopting a March 1, 2013, compliance date for affected owners or operators to comply with the new or clarified requirements. The rulemaking reformats 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 adopting new §115.111 to move exemptions to the beginning of the division; repealing §115.115 and §115.116 and adopting new §115.115 and §115.118 to split monitoring and recordkeeping into separate sections; adopting new §115.116 to contain new clarifying requirements for testing; and adopting new §115.117 to move approved test methods after all test-related requirements.

The commission is specifically requiring control device testing, conducted in accordance with the approved test methods in §115.117, for control devices, except vapor recovery units or flares, used to comply with the control requirements in §115.112(a), (b), and (e). The commission is also requiring owners or operators in the DFW, HGB, and BPA areas and El Paso County to retest the control device within 60 days after any modification that could reasonably be expected to decrease the efficiency of the control device. The commission is also requiring the initial design verification specified in 40 CFR §60.18(f) for flares used to meet a control requirement in §115.112(a), (b), and (e). This initial control device testing is intended to be a clarification of the existing requirements and is not intended to impose any additional requirements on sources that were previously required to comply with these rules. This rulemaking was proposed with an inadvertent expansion of the testing requirements for control devices other than vapor recovery units to Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties. The commission has revised the rulemaking at adoption to specify the intent of the existing requirements.

The rulemaking clarifies requirements for devices that recover and devices that destroy VOC by defining *vapor recovery unit* and using this term in rules applicable after the March 1, 2013, compliance date. The terms *vapor recovery system* and *control device* are used synonymously in portions of the existing rules. 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 rulemaking specifies design, operational parameters, and monitoring requirements for vapor recovery units. Throughout the division, wherever *vapor recovery unit or control device* was proposed, the wording has been changed to vapor control system.

The 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 requiring that flares 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.

Section by Section Discussion

In addition to the adopted rules, the commission adopts 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 Leg-*

islative 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 replaces plural phrasing for storage tanks and tank batteries with singular phrasing of a storage tank or tank battery to clarify that each exemption applies to an individual tank or tank battery. Throughout this division, the commission specifies 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 deletes the caveat in this division that true vapor pressure is *at storage conditions* since this requirement is included in the definition. The commission replaces 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 and §115.10. The commission also removes 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. As proposed, the compliance dates for new requirements were listed in §115.119(c) - (h) and referenced in rule language throughout the division. However, in response to comments, the compliance dates have been specified in the rule language in addition to §115.119 to improve readability and facilitate compliance. 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 has restructured portions of this division. Sections 115.115 - 115.117 have been repealed. The exemptions from repealed §115.117 have been moved to new §115.111. Monitoring and recordkeeping requirements from repealed §115.116 have been split into new §115.115 and §115.118, respectively. Approved test methods from repealed §115.115 have been moved to new §115.117. Amended §115.110 relates to applicability and definitions, and new §115.116 contains testing requirements. A source that is currently exempt under §115.117(a)(1) and (3) - (9) will still qualify for exemption under new §115.111(a), provided the source still meets the appropriate conditions for exemption.

§115.110, *Applicability and Definitions*

The commission changes 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 adopts 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. Paragraph (1) lists the BPA area. Paragraph (2) lists the DFW area. Paragraph (3) lists the El Paso area. Paragraph (4) lists the HGB area. Paragraph (5) lists Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties. This 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 adopted subsection (a), the commission moves the definitions currently located in §115.110(1) - (10) to adopted §115.110(b)(1) - (9) and (b)(12), respectively, without revision.

Adopted 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. Subsection (b) also indicates that in addition, the following meanings apply in this division unless the context clearly indicates otherwise.

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

Adopted 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 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 closed off inflow and outflow pipes 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*. This rulemaking defines *storage capacity* and uses it consistently throughout this division. The change is not intended to alter any existing rule requirements or to cause any additional sources to be subject to the existing rule requirements.

Adopted 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 change is not intended to alter any existing rule requirements or to cause any additional sources to be subject to the existing rule requirements.

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

Adopted 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. While a vapor recovery unit may be interpreted as meet-

ing the collective definition of a vapor control system or a vapor recovery system in §115.10 and a control device in §101.1, the commission provides this definition because of the specific provisions in the adopted rule associated with use of this type of control system and to be clear that vapor recovery units are an acceptable method of control for the purposes of this rule. In many cases in the oil and natural gas industry, vapor recovery units are the preferred method of control of VOC emissions from storage tanks.

§115.111, Exemptions

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

The commission adopts new subsection (a), moved from §115.117(a) and maintained without substantive changes except as described in this section by section discussion, listing the current exemptions that apply in the BPA, El Paso, HGB, and DFW areas. In a change since proposal, the commission has added exemptions applicable in the DFW area from proposed subsection (d) to this subsection in order to improve readability. The exemptions applicable to the DFW area in proposed subsection (d) are included in the exemptions in proposed subsection (a). Therefore, to improve readability, the commission has revised adopted subsection (a) to incorporate all applicable exemptions for the DFW area. Sources that are currently exempt under §115.117(a)(1) and (3) - (9) will still qualify for exemption under new §115.111(a), provided the sources still meet the appropriate conditions for exemption.

Adopted new paragraph (1), proposed as §115.111(a)(1) and (d)(1), contains the exemption currently located in §115.117(a)(1). Adopted paragraph (1) exempts a storage tank storing VOC with a true vapor pressure less than 1.5 psia from all requirements of this division except for the associated recordkeeping in §115.118.

Adopted new paragraph (2), currently §115.117(a)(2) and proposed as §115.111(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 is not included in §115.111 since it specified a January 1, 2009, expiration date. This exemption will no longer apply in the DFW area beginning March 1, 2013.

Adopted new paragraphs (3) - (8) contain the exemptions currently located in §115.117(a)(3) - (8) and were proposed in §115.111(a)(3) - (8) and (d)(2) - (7), respectively, with substantive changes in paragraph (5) as further discussed.

Adopted new paragraph (3), currently located in §115.117(a)(3) and proposed as §115.111(a)(3) and (d)(2), exempts a storage tank with a storage capacity less than 25,000 gallons located at a motor vehicle fuel dispensing facility from the requirements of this division.

Adopted new paragraph (4), currently located in §115.117(a)(4) and proposed as §115.111(a)(4) and (d)(3), exempts 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) 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.

Adopted new paragraph (5), currently located in §115.117(a)(5) and proposed as §115.111(a)(5) and (d)(4), exempts an external floating roof storage tank storing waxy, high pour point crude oils from any secondary seal requirements of §115.112(a), (d), and (e).

Adopted new paragraph (6), currently located in §115.117(a)(6) and proposed as §115.111(a)(6) and (d)(5), exempts a welded storage tank storing VOC with a true vapor pressure less than 4.0 psia from any external floating roof secondary seal requirement if any of the following types of primary seals were installed before August 22, 1980: a mechanical shoe seal; a liquid-mounted foam seal; or a liquid-mounted liquid filled type seal.

Adopted new paragraph (7), currently located in §115.117(a)(7) and proposed as §115.111(a)(7) and (d)(6), exempts a welded storage tank storing crude oil with a true vapor pressure equal to or greater than 4.0 psia and less than 6.0 psia from any external floating roof secondary seal requirement if any of the following types of primary seals were installed before December 10, 1982: a mechanical shoe seal; a liquid-mounted foam seal; or a liquid-mounted liquid filled type seal.

Adopted new paragraph (8), currently located in §115.117(a)(8) and proposed as §115.111(a)(8) and (d)(7), exempts a storage tank with storage capacity less than 1,000 gallons from the requirements of this division.

Adopted new paragraph (9), currently §115.117(a)(9) and proposed as §115.111(a)(9), exempts a storage tank or tank battery in the HGB area storing condensate prior to custody transfer with a condensate throughput exceeding 1,500 barrels per year on a rolling 12-month basis from the requirement in §115.112(d)(4) or (e)(4), to control flashed gases if the owner or operator demonstrates, using the 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. In response to comment, the commission has added the phrase *prior to custody transfer* to clarify that the exemption and the referenced control requirement apply to the same storage tanks. The commission has also clarified the language from proposal to specify that throughput is on a rolling 12-month basis to be consistent with the required demonstration method in §115.112(d)(5) and (e)(6). In response to comment, the commission has also clarified that the trigger for the exemption is condensate throughput rather than total liquid throughput. Condensate throughput was the original intent of these requirements in the HGB area, as seen in the explanation of control requirement in §115.112(d)(4) and exemption in §115.117(a)(9) in the 2007 HGB rulemaking published in the June 8, 2007, issue of the *Texas Register* (32 TexReg 3180).

Adopted new paragraph (10) exempts a storage tank or tank battery in the DFW area storing condensate prior to custody transfer with a condensate throughput exceeding 3,000 barrels per year on a rolling 12-month basis from the requirement in §115.112(e)(4), to control flashed gases if the owner or operator demonstrates, using the 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 50 tpy on a rolling 12-month basis. As discussed elsewhere in this preamble, the requirements to control flash emissions from crude oil and condensate storage tanks, prior to custody transfer, in the DFW area will only apply to sites with a storage tank or tank battery with uncontrolled VOC emissions that equal or exceed 50 tpy. However, if the commission publishes notice in the *Texas Register* that the DFW area has been reclassified as

severe for the 1997 eight-hour ozone standard, the requirements to control flash emissions will apply to sites with uncontrolled VOC emissions that equal or exceed 25 tpy, and this exemption will no longer apply 15 months after this notice is published.

Adopted new paragraph (11), proposed as §115.111(d)(8), exempts a storage tank or tank battery in the DFW area storing condensate prior to custody transfer with a condensate throughput exceeding 1,500 barrels per year on a rolling 12-month basis from the requirement in §115.112(e)(4), to control flashed gases if the owner or operator demonstrates, using the 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. As discussed elsewhere in this preamble, the requirements to control flash emissions from crude oil and condensate storage tanks, prior to custody transfer, in the DFW area will only apply to sites with a storage tank or tank battery with uncontrolled VOC emissions that equal or exceed 50 tpy. However, if the commission publishes notice in the *Texas Register* that the DFW area has been reclassified as severe for the 1997 eight-hour ozone standard, the requirements to control flash emissions will apply to sites with uncontrolled VOC emissions that equal or exceed 25 tpy, and this exemption will only apply 15 months after this notice is published.

The commission adopts new subsection (b), moved from §115.117(b) and maintained without substantive changes, listing exemptions that apply in Gregg, Nueces, and Victoria Counties. Adopted new paragraphs (1) - (8), contain the exemptions currently located in §115.117(b)(1) - (8), respectively.

The commission adopts 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. Adopted new paragraph (1), contains the exemption currently located in §115.117(c)(1). Adopted 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 uses 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. Adopted new paragraphs (3) - (5) contain the exemptions currently located in §115.117(c)(3) - (5), respectively.

As discussed previously in this preamble, the commission is not adopting proposed subsection (d), which has been incorporated into adopted subsection (a).

§115.112, Control Requirements

The commission amends subsection (a) to specify the control requirements applicable in the BPA, DFW, and El Paso areas. These requirements will no longer apply in the DFW area beginning March 1, 2013.

The commission replaces Tables I(a) and II(a) in §115.112(a)(1) that specify required control for storage tanks with new tables. The commission moves 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 uses terms consistent with the rest of this subsection in the column headers. Specifically, the header of the first column of 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 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 Tables I(a) and II(a) in §115.112(a)(1) is *Control Requirements* rather than *Emission Control Requirements*. The commission removes parenthetical metric equivalent measurements of pressure and volume. The commission deletes the rows from existing Tables I(a) and II(a) in §115.112(a)(1) that listed the 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 §115.111. The commission also repeats the true vapor pressure range in each row to comply with *Texas Register* style and format requirements.

The commission amends paragraph (2)(F) from the proposed language, *must be no greater than 1.0 square inch per foot*, to the adopted language, *may not be greater than 1.0 square inch per foot*, to be consistent with *Texas Register* style requirements.

The commission amends paragraph (3) to add as *defined in §115.10 of this title after vapor recovery systems* to clarify that the phrase *vapor recovery system* 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 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 requires 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 amends subsection (b) to specify the control requirements in Gregg, Nueces, and Victoria Counties.

The commission adds 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 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 requires 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 amends paragraph (2)(F) from the proposed language, *must be no greater than 1.0 square inch per foot*, to the adopted language, *may not be greater than 1.0 square inch per foot*, to be consistent with *Texas Register* style requirements.

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

In the amendment to paragraph (1), the commission specifies that no person may place, store, or hold in any storage tank any VOC other than crude oil or condensate unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in

compliance with the control requirements specified in Table I(b) of this paragraph. The commission is not adopting the proposed requirement for flares in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties. These counties are currently in attainment of the ozone NAAQS and it is not necessary to make any clarifications to the rule at this time. However, the commission expects that a flare used to comply with the control requirements in this subsection will be lit at all times when VOC vapors are routed to the flare.

The commission replaces Table I(b) in §115.112(c)(1) and specifies that references to Table I(b) are to the table in §115.112(c)(1). The commission moves 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 uses terms consistent with the rest of this subsection in the column headers. Specifically, the header of the first column of Table I(b) in subsection (c)(1) is *True Vapor Pressure* rather than *True Vapor Pressure of Compound at Storage Conditions*. The header of the second column of Table I(b) in subsection (c)(1) is *Storage Capacity* rather than *Nominal Storage Capacity*. The header of the third column of Table I(b) in subsection (c)(1) is *Control Requirements* rather than *Emission Control Requirements*. The commission deletes the rows from existing Table I(b) in subsection (c)(1) that listed the 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 §115.111. The commission also repeats the true vapor pressure range for each row to comply with *Texas Register* style and format requirements.

The commission amends 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 amends subparagraph (A) to replace the phrase *control equipment* with *control devices* because both phrases refer to internal floating covers and external floating roofs. The commission revises the phrase *This control equipment shall not be permitted* to *These control devices will not be allowed* to maintain consistency of rule language and avoid confusion with the term *permitted*.

In the amendment to subparagraph (B), the commission is not adopting the proposed requirement for flares in Matagorda and San Patricio Counties. These counties are currently in attainment of the ozone NAAQS and it is not necessary to make any clarifications to the rule at this time. However, the commission expects that a flare used to comply with the control requirements in this subsection will be lit at all times when VOC vapors are routed to the flare.

The commission amends subsection (d) to specify control requirements applicable in the HGB area. These requirements will remain in effect until March 1, 2013, when the HGB area will transition to the control requirements in §115.112(e). The commission is including the HGB area in the control requirements of §115.112(e), which also apply in the DFW area. In response to comments, the commission is delaying the transition to compliance with the requirements in §115.112(e) until March 1, 2013, because compliance may require the installation of additional or different control equipment. In response to comments, the

compliance date has been specified rather than referenced in §115.119(e)(2), as proposed, to improve readability and facilitate compliance.

The commission amends paragraph (2)(F) from the proposed language, *must be no greater than 1.0 square inch per foot*, to the adopted language, *may not be greater than 1.0 square inch per foot*, to improve readability.

The commission has changed paragraph (2)(G)(i) since proposal to change *seal* to *seal or wiper* because wiper was inadvertently omitted in the proposed language.

The commission amends 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 change is non-substantive and harmonizes the language with degassing requirements in Subchapter F, Division 3. If a storage tank is subject to the degassing rules, the owner or operator will need to comply with the requirement in Subchapter F, Division 3. The original language 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 new language accomplishes the same purpose while avoiding unnecessary connection between the two rules.

The commission adopts amended paragraph (4) to specify that condensate has the meaning defined in §101.1 when used to determine the need to route vapors from a storage tank or tank battery storing condensate prior to custody transfer to a vapor recovery system. Routing vapors to a vapor control system necessitates that all openings in the storage tank other than the connection to the vapor control system either are closed; only passing air into the storage tank; or open for a minimal time to relieve excess pressure or when gauging or sampling is conducted.

The commission amends adopted paragraph (5) to specify that a storage tank or tank battery storing condensate prior to custody transfer with uncontrolled VOC emissions over 25 tpy must route vapors to a vapor control system and specifies the emission estimation methods in subparagraphs (A) - (D). Routing vapors to a vapor control system necessitates that all openings in the storage tank other than the connection to the vapor control system either are closed; only passing air into the storage tank; or open for a minimal time to relieve excess pressure or when gauging or sampling is conducted.

The commission amends adopted subparagraphs (A) - (C) to add the phrase *the owner or operator may* to comply with *Texas Register* style requirements.

The commission adopts subsection (e) specifying control requirements applicable in the HGB and DFW areas after March 1, 2013. In response to comments, the compliance date has been specified, rather than referenced in §115.119(e) as proposed, to improve readability and facilitate compliance. These control requirements are based on requirements in §115.112(d) applicable prior to this rulemaking in the HGB area. The commission proposed control requirements for the DFW area in a separate subsection (f) which has been combined with this subsection in order to increase clarity and reduce redundant rule language. Adopted subsection (e)(3)(A) and (4) contains differentiations added at adoption between requirements applicable in the HGB and DFW areas.

Adopted paragraph (1), proposed as §115.112(e)(1) and (f)(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 requirement 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) in §115.112(a)(1).

The commission adopts paragraph (2), proposed as §115.112(e)(2) and (f)(2), specifying that for floating roof or cover storage tanks subject to the provisions of subsection (e)(1), the requirements in subparagraphs (A) - (J) apply. Paragraph (2) contains requirements currently applicable in the HGB area and located in §115.112(d)(2). Subparagraphs (A) and (B) together contain the requirements currently located in §115.112(d)(2)(A). 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.

Adopted subparagraph (A) specifies that all openings in an internal floating cover or external floating roof, as defined in §115.10, must provide a projection below the liquid surface. This 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 subparagraph (B). The proposed phrase *except for automated bleeder vents (vacuum breaker vents) and rim space vents* has been moved to the end of this adopted subparagraph as a complete sentence to be consistent with the structure of other subparagraphs in this paragraph.

Adopted 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. The commission's intent is that the maximum gap requirement is an indication of a gasket in good operating condition. The proposed phrase *except for automatic bleeder vents (vacuum breaker vents), rim space vents, leg sleeves, and roof or cover drains* has been moved to the end of the subparagraph as a complete sentence to be consistent with the structure of other subparagraphs in this paragraph. This 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 subparagraph (A).

Adopted 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 subparagraph contains the same requirement as §115.112(d)(2)(B) applicable in the HGB area prior to this rulemaking.

The commission adopts 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 subparagraph contains the same requirement as §115.112(d)(2)(C) applicable in the HGB area prior to this rulemaking.

Adopted subparagraph (E) specifies that any external floating roof drain that empties into the stored liquid must be equipped with a slotted membrane fabric cover that covers at least 90% of the area of the opening or an equivalent control that must be kept in a closed (i.e., no gap of more than 1/8 inch) position at all times except when the drain is in actual use. Stub drains on internal floating cover tanks are not subject to this requirement. This subparagraph contains the same requirement as §115.112(d)(2)(D) applicable in the HGB area prior to this rulemaking.

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

The commission adopts 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 may not be greater than 1.0 square inch per foot of storage tank diameter. The commission amends paragraph (2)(F) from the proposed language, *must be no greater than 1.0 square inch per foot*, to the adopted language, *may not be greater than 1.0 square inch per foot*, to improve readability. This subparagraph contains the same substantive requirements as §115.112(d)(2)(F) applicable in the HGB area prior to this rulemaking.

Adopted 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. Clause (i) lists the first option: a pole wiper and a pole float that has a seal or wiper at or above the height of the pole wiper. Clause (ii) lists the second option: a pole wiper and a pole sleeve. Clause (iii) lists the third option: an internal sleeve emission control system. Clause (iv) lists the fourth option: a retrofit to a solid guidepole system. Clause (v) lists the fifth option: a flexible enclosure system. Clause (vi) lists the sixth option: a cover on an external floating roof tank. Subparagraph (H)(i) - (vi) is identical to the requirements in §115.112(d)(2)(G), except for non-substantive grammatical changes. The commission has changed clause (i) since proposal by changing *seal* to *seal or wiper* to reflect the original language.

The commission adopts subparagraph (I) requiring an external floating roof or internal floating cover to be floating on the liquid surface at all times except as allowed under the circumstances in the clauses of this subparagraph. The subparagraph is substantively equivalent to current §115.112(d)(2)(H). Requirements in clauses (i), (iii), and (vii) of this subparagraph are substantively equivalent to requirements in §115.112(d)(2)(H) in effect in the HGB area prior to this rulemaking.

Adopted clause (i) allows the roof to not be floating on the liquid at the start of the initial fill or the refill after the tank has been cleaned. As proposed, this requirement was included in subparagraph (I).

Adopted clause (ii) 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. It clarifies the commission's intent that the ex-

isting 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.

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

Adopted clause (iv) allows a roof or cover landing when the storage tank has a storage capacity less than 25,000 gallons. Clause (iv) 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.

Adopted clause (v) 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. Clause (v) 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. 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. The commission requires vapors generated under the landed roof to be routed to the control device after it is connected. Routing vapors under a landed roof to a control device necessitates that all openings in the storage tank other than the connection to the vapor control system either are closed or only passing gases into the storage tank.

Adopted clause (vi) allows a roof or cover landing when all VOC emissions from the tank, including emissions from roof or cover landings, have been included in an emissions limit or cap first approved under 30 TAC Chapter 116 prior to March 1, 2013. The 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) listed 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 SIC codes that are not listed, including bulk fuel terminals, to apply for authorization by January 5, 2013. Requiring authorization of these emissions three months after the last permit application deadline and 14 months after adoption of the rule change should provide ample time for all entities that desire to apply for and receive authorization for these emissions. Owners or operators concerned about the timing of this provision are encouraged to contact the commission's Air Permits Division prior to submitting a permit application to ensure that the permit application and review process proceeds as quickly as possible.

Adopted clause (vii) 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 25 tpy limit coincides with the maximum amount of VOC emissions from a regulated entity that can be authorized by any Permit by Rule (PBR). In addition to complying with §115.112(e)(2)(H), a site must have its VOC emissions permitted by either a PBR or a permit approved under Chapter 116, which falls under clause (vi) of this subparagraph. Therefore, 25 tpy is the maximum amount of VOC emissions a site can operate with under this clause.

The commission adopts paragraph (3), proposed as §115.112(e)(3) and (f)(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.

Adopted subparagraph (A), proposed as §115.112(e)(3)(A) and (f)(3)(A) requires a control device, other than a vapor recovery unit or a flare, to maintain the control efficiency specified in this subparagraph.

Adopted clause (i), proposed as a portion of §115.112(e)(3)(A), specifies the minimum control efficiency in the HGB area as 90%. This clause 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.

Adopted clause (ii), proposed as a portion of §115.112(f)(3)(A), specifies the minimum control efficiency in the DFW area as 95%. The commission has determined that 95% control is RACT in the DFW area. Although 95% control is more stringent than the 90% control level currently required in the HGB area, the commission has determined that it is technologically and economically feasible to achieve 95% control of VOC emissions from these sources.

Adopted 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 subparagraph contains requirements not currently applicable in the HGB area. In a change since proposal, the commission has substituted VOC throughput for *crude oil and condensate* throughput to clarify the commission's intent that vapor recovery units may be used for storage tanks storing VOC other than crude oil and condensate. 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. Routing vapors to a vapor control system necessitates that all openings in the storage tank other than the connection to the vapor control system either are closed; only passing air into the storage tank; or open for a minimal time to relieve excess pressure or when gauging or sampling is conducted. 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 included to assure that the vapors are used for the beneficial purpose of sale or fuel rather than merely emitted to the atmosphere.

Adopted 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 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 adopts paragraph (4), proposed as §115.112(e)(4) and (f)(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 vapor control system if the liquid throughput of an individual tank or the aggregate of tanks in a tank battery exceeds a threshold listed in subparagraphs (A) and (B). The proposed phrase *throughput through an individual tank* has been replaced with *throughput of an individual tank* to improve readability. In response to comment, the commission has clarified that the throughput threshold is condensate rather than total liquid throughput. This clarification was the original intent of these requirements in the HGB area, as seen in the explanation of control requirement §115.112(d)(4) in the 2007 HGB rulemaking published in the June 8, 2007, issue of the *Texas Register* (32 TexReg 3180). Routing vapors to a vapor control system necessitates that all openings in the storage tank other than the connection to the vapor control system either are closed; only passing air into the storage tank; or open for a minimal time to relieve excess pressure or when gauging or sampling is conducted.

The commission adopts new subparagraphs (A) and (B), which were added in response to comment, to maintain thresholds at major source levels in the event of a reclassification of the DFW area. Subparagraph (A) implements the current threshold for the HGB severe nonattainment area, 1,500 barrels of condensate. Subparagraph (B) implements the threshold for the DFW area in clauses (i) and (ii). Clause (i) implements the threshold for a serious nonattainment area, 3,000 barrels of condensate. Clause (ii) implements the threshold at 1,500 barrels of condensate for the DFW area in the event that it is reclassified as a severe nonattainment area. Clause (ii) is only implemented in accordance with the compliance schedule in §115.119(b)(1)(C). The commission equates the major source threshold with a condensate throughput by applying a 33.3 pounds per barrel (lb/bbl) of VOC emission factor.

The commission adopts paragraph (5), proposed as §115.112(e)(5) and (f)(5), requiring that storage tanks storing crude oil or condensate prior to custody transfer or at a pipeline breakout station must have flashed gases routed to a vapor control system if the uncontrolled VOC emissions from an individual storage tank or from the aggregate of storage tanks in a tank battery equal or exceed a threshold on a rolling 12-month basis. Routing vapors to a vapor control system necessitates that all openings in the storage tank other than the connection to the vapor control system either are closed; only passing air into the storage tank; or open for a minimal time to relieve excess pressure or when gauging or sampling is conducted.

The commission adopts subparagraphs (A) and (B), which were added in response to comment, to maintain thresholds at major source levels in the event of a reclassification of the DFW

area. Subparagraph (A) incorporates the current 25 tpy VOC threshold for the HGB severe nonattainment area. Subparagraph (B) implements the threshold for the DFW area in clauses (i) and (ii). Clause (i) implements a 50 tpy VOC threshold for the DFW area as a serious nonattainment area. Clause (ii) implements the 25 tpy threshold for the DFW area in the event that it is reclassified as a severe nonattainment area. Clause (ii) is only implemented in accordance with the compliance schedule in §115.119(b)(1)(C).

Adopted paragraph (6), proposed as part of §115.112(e)(5) and (f)(5), lists the required emission estimation methods for uncontrolled emissions from a storage tank or tank battery. As part of the split from proposed paragraph (5), the commission has copied the phrase *from storage tanks storing crude oil or condensate prior to custody transfer or at a pipeline breakout station* from paragraph (5) to paragraph (6) to specify which emission estimates are intended. If emissions determined using direct measurements or other methods approved by the executive director under paragraph (6)(A) or (B) are higher than emissions estimated using the default factors or charts in paragraph (6)(C) or (D), the higher value must be used.

The commission amends adopted paragraph (6) to add the phrase *the owner or operator may* to proposed subparagraphs (A) - (D) to comply with *Texas Register* style requirements.

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

Adopted 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 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 subparagraph contains the same requirements as §115.112(d)(5)(D) applicable in the HGB area prior to this rulemaking.

Adopted 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 subparagraph contains the same requirements as §115.112(d)(5)(B) applicable in the HGB area prior to this rulemaking.

Adopted 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 subparagraph contains the same require-

ments 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 the TCEQ's 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*.

As discussed elsewhere in the Section by Section Discussion portion of this preamble, the commission is not adopting proposed subsection (f) because the provisions in proposed subsection (f) have been combined with adopted subsection (e).

§115.113, *Alternate Control Requirements*

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

§115.114, *Inspection Requirements*

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

Adopted paragraph (1) has been reformatted to increase clarity and readability. All requirements have been maintained. Paragraph (1) requires an annual inspection of an internal floating cover and its primary and secondary seal. 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). Degassing must be performed in accordance with Chapter 115, Subchapter F, Division 3, if the storage tank meets the applicability of Chapter 115, Subchapter F, Division 3. The commission includes a reference to Chapter 115, Subchapter F, Division 3 to remind owners or operators of potentially applicable regulations. 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).

Adopted paragraph (2) specifies that gaps in the secondary seal of an external floating roof tank must be measured annually. The paragraph contains an amendment adding §115.112(e)(2)(G) to the list of control requirements for a secondary seal gap measurement due to the addition of §115.112(e). Paragraph (2) has also been reformatted to increase clarity and readability. 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). Degassing must be performed in accordance with Chapter 115, Subchapter F, Division 3 if the storage tank meets the applicability of Chapter 115, Subchapter F, Division 3. The commission includes a reference to Chapter 115, Subchapter F, Division 3 to remind owners or operators of potentially applicable regulations. Subparagraph (B) contains the requirements for an owner or operator to request extensions for repair. These requirements are currently located in paragraph (2).

Adopted paragraph (3) contains an amendment that adds §115.112(e)(2)(G) to the list of control requirements for a secondary seal gap limit due to the addition of §115.112(e). The word *storage* has been added to the proposed rule language to improve consistency with other portions of this section in which tanks are referred to as storage tanks.

Adopted paragraph (4) specifies that the secondary seal of an external floating roof tank must be inspected at least every six months. The paragraph contains an amendment that adds §115.112(e)(2)(F) and (G) to the list of control requirements for

seal integrity and a secondary seal gap limit due to the addition of §115.112(e). Paragraph (4) has also been reformatted to increase clarity and readability. 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). Degassing must be performed in accordance with Chapter 115, Subchapter F, Division 3, if the storage tank meets the applicability of Subchapter F, Division 3. The commission includes a reference to Subchapter F, Division 3, to remind owners or operators of potentially applicable regulations. 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 amends subsection (b) which specifies inspection requirements applicable in Gregg, Nueces, and Victoria Counties.

Adopted paragraph (1) contains inspection requirements for internal floating cover storage tanks and has been changed from proposal by non-substantively splitting its requirements into two subparagraphs to provide consistency with parallel paragraphs of this section. Subparagraph (A) contains the specific items requiring inspection and the requirement to repair or degas within 60 days. Subparagraph (B) contains the requirements for an owner or operator to request extensions to the repair deadline.

Adopted paragraph (2) specifies annual secondary seal gap measurement requirements for external floating roof storage tanks. This paragraph has been reformatted to increase clarity and readability. 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). 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).

Adopted paragraph (3) includes the word *storage* that has been added to the proposed rule language to improve consistency with other portions of this section in which tanks are referred to as storage tanks.

Adopted paragraph (4) specifies annual visual inspection requirements for secondary seals on external floating roof tanks. This paragraph has been reformatted to increase clarity and readability. 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). 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 amends subsection (c) which specifies inspection requirements applicable in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties. No substantive changes are adopted for any of the paragraphs of subsection (c). The proposed phrase *requirements shall apply for all persons in* has been replaced with *requirements shall apply in* to improve readability and consistency with other portions of this division.

Adopted paragraph (1) contains inspection requirements for internal floating cover storage tanks and has been changed from proposal by non-substantively splitting its requirements into two subparagraphs to provide consistency with parallel paragraphs of this section. Subparagraph (A) contains the specific items requiring inspection and the requirement to repair or degas within

60 days. Subparagraph (B) contains the requirements for an owner or operator to request extensions to the repair deadline.

Adopted paragraph (2) contains inspection requirements for external floating roof storage tanks and has been changed from proposal by non-substantively splitting its requirements into two subparagraphs to provide consistency with parallel paragraphs of this section. Subparagraph (A) contains the specific items requiring inspection and the requirement to repair or degas within 60 days. Subparagraph (B) contains the requirements for an owner or operator to request extensions to the repair deadline.

§115.115, *Monitoring Requirements*

The commission adopts 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.

Throughout this section, where continuous monitoring is specified, the commission's intent is that a measurement be taken at least every 15 minutes.

Adopted new subsection (a) amends requirements currently located in §115.116(a). 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 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 deleted the word continuously from this subsection because where continuous monitoring is required, it is specified elsewhere in this subsection.

The commission adopts 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.

Adopted 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 changes 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.

Adopted new paragraph (3) specifies that an owner or operator shall monitor a carbon adsorption system according to one of the options in subparagraphs (A) or (B). The language in this paragraph is clarification of the language in existing §115.116(a)(3)(C) that required continuous VOC concentration measurement to determine if breakthrough has occurred. Subparagraph (A) specifies 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. Subparagraph (B) provides an alternative engineering safeguard to switch the vent gas flow to fresh carbon at a

regular predetermined time interval that is less than the carbon replacement interval determined by the maximum design flow rate and the VOC concentration in the gas stream vented to the carbon adsorption system or carbon adsorber. The alternative requirement assures protection at least equivalent to the current language since owners or operators are required to switch to fresh carbon in all possible operating scenarios before the system reaches its absorption capacity rather than switching after measurements, which can be as much as 15 minutes apart, detect breakthrough. In conjunction with the testing requirements in §115.116, pre-breakthrough operation of the carbon adsorption system or carbon adsorber will be in compliance with applicable control requirements. The proposed phrase *replacement interval that is determined by* has been replaced with the phrase *replacement interval determined by* to improve readability.

Adopted 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. The owner or operator choosing to conduct this monitoring using Method 21 shall monitor once every seven calendar days. The commission chooses this non-continuous frequency to provide reasonable assurance that the device is functioning effectively.

Adopted 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 determined by the maximum design flow rate and the VOC concentration in the gas stream vented to the carbon adsorption system. Owners or operators choosing this option should be prepared to show how the interval was determined.

Adopted 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.

Adopted new paragraph (5) specifies that the owner or operator of any stationary tank who is required to comply with §115.112(e)(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) in affected areas, since compliance with the control requirement it references is only required after that date.

Adopted new subparagraphs (A) and (B) specify examples of operational parameters of a vapor recovery unit. Adopted subparagraph (A) specifies that the run-time of the compressor or motor in a vapor recovery unit is an operational parameter; adopted subparagraph (B) lists the amount of recovered vapors as another operational parameter; and adopted subparagraph (C) lists other parameters sufficient to demonstrate proper functioning to design specifications. The operational parameter in adopted subparagraph (A) will assure that a compressor or motor-driven vapor recovery unit is operating; adopted subparagraph (B) will assure that a vapor recovery unit is transferring vapors; and adopted 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 appro-

priate 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 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 design 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 to demonstrate 95% control. The replacement of the liquid must follow the manufacturer's recommended procedure. For the purposes of this rule, the commission will not allow the use of Method 21 to conduct this monitoring.

Adopted 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).

Adopted 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. The commission deleted the word continuously from this subsection because where continuous monitoring is required, it is specified elsewhere in this subsection.

Adopted new paragraphs (1) - (3) have been revised from their proposed version to read *for a (control device name) the owner or operator shall monitor (operational parameter)* to improve readability and consistency with other monitoring provisions in this division.

Adopted 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.

Adopted 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 changes the word *chiller* from existing §115.116(b)(3)(B) to *condensation system* for uniformity with recent revisions in this chapter.

Adopted 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. The owner or operator choosing to conduct this monitoring using Method 21 shall monitor once every seven calendar days. The commission chooses this non-continuous frequency to provide reasonable assurance that the device is functioning effectively.

§115.116, Testing Requirements

The commission adopts new subsection (a) that specifies testing requirements that begin on March 1, 2013, in the DFW, HGB, and BPA areas and El Paso County.

Adopted new paragraph (1), proposed as portions of subsection (a) and entire paragraphs (3) and (4), requires an initial test for a vapor control system, other than a vapor recovery unit or a flare, that must meet the control requirement in §115.112(a)(3) and (e)(3)(A) to be conducted in accordance with the approved test methods in §115.117. If the vapor control system is modified in any way that could reasonably be expected to decrease the control efficiency, the device must be retested within 60 days of the modification.

The commission is specifically requiring initial control device testing; however, the test 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, an initial test 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 in §115.117 will be sufficient for this requirement. The retesting provision is necessary to demonstrate that the control device continues to meet the control requirement after modification.

The commission adopts paragraph (2), proposed as §115.116(b)(1), specifying testing requirements for a flare used to comply with §115.112(a)(3) and (e)(3)(A). The control requirements for flares include compliance with 40 CFR §60.18, including the design verification test. The 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 testing provisions is not required until March 1, 2013. The commission contends that ample time is available for any owners or operators who have not already conducted this design verification test.

The commission is not adopting the provisions of proposed paragraph (2), which would have required 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 because adopted §115.119(f) specifies the same 60-day period for newly affected sources to come into compliance.

The commission is not adopting proposed paragraphs (3) and (4) because the provisions of these paragraphs have been included in paragraph (1).

The commission adopts new subsection (b) that specifies testing requirements in Gregg, Nueces, and Victoria Counties.

Adopted new paragraph (1) requires an initial test for a vapor control system, other than a vapor recovery unit or a flare, used to comply with the control requirements in §115.112(b) in accordance with the approved test methods in §115.117. The commission inadvertently omitted this provision at proposal for these counties. The commission proposed same testing requirements for the DFW, El Paso, and HGB areas. The test 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, an initial test 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).

Adopted new paragraph (2), proposed as §115.116(b)(1) specifies that the flare must pass the design verification test required by 40 CFR §60.18(f).

The commission is not adopting proposed paragraph (2) which would have required 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 because adopted §115.119(f) specifies the same 60-day period for newly affected sources to come into compliance.

Testing already performed on existing sources in accordance with test methods in §115.117 will be sufficient for this requirement. Although not required by §115.118, owners or operators are encouraged to maintain records of this testing as long as the vapor control system is in use in order to demonstrate compliance with this section.

§115.117, *Approved Test Methods*

The commission adopts new §115.117 specifying that all affected persons in the BPA, DFW, El Paso, and HGB areas and in Gregg, Nueces, and Victoria Counties shall determine compliance with the requirements in this division by applying the test methods in §115.117 as appropriate. Adopted §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 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 change assures a clear statement of the necessary test method in all situations. The commission has added clarification that this section only applied and continues to apply in the BPA, DFW, El Paso, and HGB areas and in Gregg, Nueces, and Victoria Counties because the proposed language inadvertently applied these requirements to all affected persons.

Adopted new paragraph (1) contains language currently located in §115.115(a)(1) and (b)(1) specifying use of test methods 1 - 4 for determining flow rate.

Adopted new paragraph (2) contains language currently located in §115.115(a)(2) and (b)(2) specifying use of Method 18 for determining gaseous organic compound emissions.

The commission adds adopted new paragraph (3) in response to comment specifying use of Method 21 for determining VOC concentrations for the purpose of checking for leaks, or to determine breakthrough on a carbon adsorption system or carbon adsorber. For the purposes of this rule, the commission will not allow the use of Method 21 to determine the efficiency of a control device.

Adopted new paragraph (4), proposed as §115.117(3), contains language currently located in §115.115(a)(3) and (b)(3) specifying use of Method 22 for determining visible emissions from flares. Adopted new paragraph (3) rephrases the applicability from *visual determination of fugitive emissions from material sources and smoke emissions from flares* to *determination of visible emissions from flares*. Although the current language contains the title of Method 22, the language more accurately depicts applications of the test method in this division.

Adopted new paragraph (5), proposed as §115.117(4), contains language currently located in §115.115(a)(4) and (b)(4) specifying

Method 25 for determining total gaseous nonmethane organic emissions.

Adopted new paragraph (6), proposed as §115.117(5), contains language currently located in §115.115(a)(5) and (b)(5) specifying Methods 25A or 25B for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis.

Adopted new paragraph (7), proposed as §115.117(6), contains language currently located in §115.115(a)(6) and (b)(6) for measuring storage tank seal gap.

Adopted new paragraph (8), proposed as §115.117(7), contains test methods currently located in §115.115(a)(7) and (b)(7) for determination of true vapor pressure. In addition to the consolidation, the commission adds use of standard reference texts and removes the 1989 reference year in American Society for Testing and Materials Test Method D323 in order to update the reference. The commission also specifies that true vapor pressure must be corrected to storage temperature according to the procedure in American Petroleum Institute Publication 2517. The commission has deleted the proposed reference to the third edition of American Petroleum Institute Publication 2517 to assure that the most recent version is used. The actual storage temperature of an unheated storage tank may be determined using the maximum local monthly average ambient temperature as reported by the National Weather Service. 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, either the measured temperature, if available, or the set point of the heating system must determine this temperature. The proposed phrase *tank or vessel* has been replaced with *storage tank* because this division applies to storage tanks, not vessels.

Adopted new paragraphs (9) and (10), proposed as §115.117(8) and (9), were located in existing §115.115(c) prior to this rulemaking. The commission adopts minor phrasing amendments in paragraph (9) 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 adopts new paragraph (11), proposed as §115.117(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 paragraph is added to allow additional flexibility for affected owners and operators and to harmonize this section with other portions of this chapter.

Adopted new paragraph (12), proposed as §115.117(11), contains language currently located in §115.115(a)(8), (b)(8), and (c)(8) concerning use of modified test methods.

§115.118, *Recordkeeping Requirements*

The commission adopts new §115.118 that contains recordkeeping requirements.

The commission adopts 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.

Adopted 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 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.

Adopted 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 in §115.111(a)(1), (6), and (7) 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) 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 phrase *requirement for a secondary seal as specified in §115.111* has been replaced with *requirement of a secondary seal in §115.111* to improve readability.

Adopted 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 ($E_{\text{Reportable}}$) 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. This change 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. Explanations of the variables follow the equation.

Adopted new paragraph (4) contains rephrasing of the requirements currently located in existing §115.116(a)(3) that specify recordkeeping requirements for monitoring required by §115.115(a). Such records must be sufficient to demonstrate proper functioning of those devices to design specifications.

Adopted 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.

Adopted new subparagraph (B) expands upon the recordkeeping language currently located in existing §115.116(a)(3)(B). The former description for the control device was a chiller. The commission uses the phrase *condensation system* to describe this equipment in order to maintain consistency with other portions of this chapter. The 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.

Adopted new subparagraph (C) expands upon the recordkeeping language currently located in existing §115.116(a)(3)(C) by specifying owners or operators using a carbon adsorption system or carbon adsorber shall maintain records of the system operation specified in clause (i) or (ii). 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). New clause (ii) requires the owner or operator to record the date and time each carbon container is used if the carbon adsorption system or carbon adsorber is switched on a predetermined interval according to §115.115(a)(3)(B) and to document how they calculated the replacement interval specified in §115.115(a)(3)(B). The 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 added documentation of the carbon replacement interval calculation after proposal to ensure rule enforceability.

Adopted new subparagraph (D) contains some of the recordkeeping 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.

Adopted new subparagraph (E), proposed as a portion of §115.118(a)(5), specifies that the owner or operator shall keep records of the continuous operational parameter monitoring of a vapor recovery unit required by §115.115(a)(5). This subparagraph and subparagraph (F) were split to provide separate recordkeeping requirements for monitoring requirements §115.115(a)(5) and (6).

Adopted new subparagraph (F), proposed as a portion of §115.118(a)(5), requires owners or operators to maintain records of the continuous operational parameter monitoring required in §115.115(a)(6) sufficient to demonstrate proper functioning of the control device to design specifications.

Adopted new paragraph (5), proposed as §115.118(a)(6), amends the requirements currently located in existing §115.116(a)(4) to specify that the results of any testing conducted in accordance with §115.116 or §115.117 must be maintained. A provision is included to allow off-site record storage under the condition that such records must be made available for review within 24 hours. This requirement provides operational flexibility to owners or operators with unstaffed locations not equipped for record storage.

Adopted new paragraph (6), proposed as §115.118(a)(7), contains the recordkeeping requirements currently located in existing §115.116(c).

Adopted new subparagraph (A) amends language currently located in existing §115.116(c)(1) and specifies that the owner or operator of any fixed roof storage tank that is not required in §115.112(d)(1) or (e)(1) to be equipped with an external floating roof, internal floating cover, or vapor control system to 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. These records are necessary to document that material stored

in fixed roof tanks meets the criteria for exemption from control requirements.

Adopted new subparagraph (B) 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 uncontrolled emissions from the storage tank on a 12-month rolling basis. The records 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 control system because the entity is below an applicability threshold for VOC emissions. Records must be sufficient to allow investigators to determine whether emissions have been calculated by an appropriate method. In a change from the current requirement, the commission is requiring the emission estimation to be made on a 12-month rolling basis to match the control requirements in §115.112(d)(4) and (5) and (e)(4) and (5). If a computer simulation is used, records of the input and output must be retained.

Adopted new subparagraph (C) added in response to comment specifies that owners or operators extending the compliance deadline because a storage tank must be emptied and degassed are required to maintain records of the last time the storage tank was emptied and degassed. Owners and operators of storage tanks may already be required to keep such records for other purposes and these records will suffice for this purpose.

Adopted 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 March 1, 2011, must be maintained for at least five years. The 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 rule.

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

Adopted 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 new rules. 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.

The commission is not adopting proposed subsection (c) because the provisions in proposed subsection (c) have been incorporated into adopted subsection (a).

§115.119, Compliance Schedules

In response to comment, the commission adopts changes in the DFW area with a later compliance date, March 1, 2013, to provide additional time for owners and operators to implement necessary changes. Since this rulemaking is not included in the RFP SIP revision, the proposed December 1, 2012, compliance date is no longer necessary. Recent similar rule changes were implemented in the HGB area at the beginning of the HGB ozone

season one year after adoption of the rule changes, January 1, 2009, which was 18 months after adoption. While three months shorter, the beginning of the ozone season in the DFW area one year after adoption of these rule changes, March 1, 2013, follows the precedent set in the HGB area while allowing sufficient time for owners and operators to implement necessary changes. For consistency, all other affected counties are on the same implementation schedule.

Adopted subsection (a) states the compliance date for the HGB area, consisting of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties, has already passed and the affected owner or operator must remain in compliance with this division unless specified in paragraphs (1) - (3).

Adopted paragraph (1), proposed as §115.119(d), contains the language currently in portions of §115.119(c) with modification for sections that have been moved or added and specifies that compliance with §115.112(d), existing monitoring provision now in §§115.115(a), 115.117, and 115.118(a) was required by January 1, 2009, except as specified in subparagraphs (A) and (B). Owners or operators subject to §115.112(d) prior to March 1, 2013, will continue to be subject to §115.112(d) until they comply with the requirements of §115.112(e). The existence of §115.112(e) does not constitute an extension of requirements to comply with §115.112(d). Instead, it provides a transition between the two sets of requirements.

Subparagraph (A), proposed as §115.119(d)(1), specifies that storage tanks that would need to be emptied and degassed in order to comply with this division can delay compliance until the next emptying and degassing activity, but no later than January 1, 2017. In a change from the proposed language, the adopted language consistently specifies emptying and degassing, as a single triggering event, which was the intent of the 2007 rule revision, as stated in the June 8, 2007, issue of the *Texas Register* (32 TexReg 3293). 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 floating roof tanks are 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 were proposed. Regulated entities that use the delay of compliance provision should be prepared to justify why tank emptying and degassing were necessary to comply with the rules.

Subparagraph (B), proposed as §115.119(d)(2), contains language currently in §115.119(c) requiring compliance by January 1, 2009, for a storage tank with a storage capacity less than 210,000 gallons storing crude oil and condensate prior to custody transfer regardless if compliance with these requirements would require emptying and degassing of the storage tank.

Paragraph (2) specifies the compliance date for this rulemaking. It requires compliance with §§115.112(e), 115.115(a)(3)(B), (5), and (6), and 115.116 by March 1, 2013.

Subparagraph (A), proposed as §115.119(e)(1), specifies that storage tanks that would need to be emptied and degassed in order to comply with this division can delay compliance until the next emptying and degassing activity, but no later than January 1, 2017. In a change from the proposed language, the adopted language consistently specifies emptying and degassing, as a single triggering event, which was the intent of the 2007 rule revision, as stated in the June 8, 2007, issue of the *Texas Register* (32 TexReg 3293). 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 floating roof tanks are 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 were proposed. Regulated entities that use the delay of compliance provision should be prepared to justify why tank emptying and degassing were necessary to comply with the rules.

Subparagraph (B), proposed as §115.119(e)(4) with a different date, requires compliance by March 1, 2013, for a storage tank with a storage capacity less than 210,000 gallons storing crude oil and condensate prior to custody transfer regardless if compliance with these requirements would require emptying and degassing of the storage tank.

Subsection (b) states the compliance date for the DFW area consisting of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties. The previous rule change affecting these counties required compliance by March 1, 2009, for five of the counties as stated in current §115.119(b). The other four counties have been required to be in compliance with this division, as stated in current §115.119(a), that became effective June 14, 2007. This subsection combines the compliance obligations for all nine counties and specifies that owners or operators must be in compliance on or before March 1, 2009.

Paragraph (1), proposed as §115.119(c) and (c)(3) with a different date, requires compliance with new requirements applicable in the DFW area, §§115.112(e), 115.115(a)(3)(B), (5), and (6), 115.116, and 115.118(a)(6), by March 1, 2013. In response to comment, certain monitoring requirements in §115.115 were added to this list.

Subparagraph (A), proposed as §115.119(c)(1), specifies that storage tanks that would need to be emptied and degassed in order to comply with §§115.112(e), 115.115(a)(3)(B), (5), and (6), 115.116, and 115.118(a)(6) can delay compliance until the next emptying and degassing activity, but no later than January 1, 2021. In a change from the proposed language, the adopted language consistently specifies emptying and degassing, as a single triggering event, which was the intent of the 2007 rule revision, as stated in the June 8, 2007, issue of the *Texas Register* (32 TexReg 3293). 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 floating roof tanks are 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 were adopted. 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.

Subparagraph (B), proposed as §115.119(c)(4) with a different date, requires compliance by March 1, 2013, for a storage tank with a storage capacity less than 210,000 gallons storing crude oil and condensate prior to custody transfer regardless if compliance with these requirements would require emptying and degassing of the storage tank.

Adopted subparagraph (C) was added in response to comment. It specifies if the commission publishes notice in the *Texas Register* that the DFW area has been reclassified as severe for the 1997 eight-hour ozone standard, the control requirements for flash emissions will apply to sites with uncontrolled VOC emissions that equal or exceed 25 tpy. Once the commission publishes notice in the *Texas Register*, affected sources will have 15 months to comply with these control requirements. The commis-

sion is adopting this provision to avoid a duplicative demonstration of the technological and economic feasibility of controlling flash emissions from crude oil and condensate storage tanks, prior to custody transfer, in the DFW area with uncontrolled VOC emissions that equal or exceed 25 tpy. The commission has determined these requirements represent RACT for major sources. The photochemical modeling and corroborative analyses show the DFW area will attain the 1997 eight-hour ozone standard in 2012. However, if in the future the DFW area were reclassified to severe for the 1997 eight-hour ozone standard, the commission would be required to implement RACT for sites with the potential to emit at least 25 tpy.

Paragraph (2), proposed as §115.119(c)(2) with a different date, states that storage tanks in the DFW area transition from compliance with §115.112(a) to §115.112(e) on March 1, 2013.

Subsection (c), proposed as §115.119(f) with a different date, specifies the compliance date for the BPA area consisting of Hardin, Jefferson, and Orange Counties. The previous rule change affecting these counties required compliance with all provisions of this division by March 7, 1997. This subsection requires compliance with the new provisions in §115.115(a)(3)(B), (5), and (6), and §115.116 by March 1, 2013.

Subsection (d), proposed as §115.119(g) with a different date, specifies the compliance date for El Paso County. The previous rule change affecting these counties required compliance with all provisions of this division by January 1, 1996. This subsection requires compliance with the new provisions in §115.115(a)(3)(B), (5), and (6), and §115.116 by March 1, 2013.

Subsection (e), proposed as §115.119(h) with a different date, specifies the compliance date for Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties. The previous rule change affecting these counties required compliance with all provisions of this division by July 31, 1993. This subsection requires compliance with the new provisions in §115.116(b) by March 1, 2013.

Subsection (f) specifies that owner or operator that becomes subject to this division on or after the date specified in subsections (a) - (e) of this section, shall comply with the requirements in this division no later than 60 days after becoming subject. This provision was added after proposal to allow sufficient adjustment time for owners or operators of sites where production increases over an applicability threshold.

Final Draft Regulatory Impact Analysis

The commission reviewed the adopted rulemaking in light of the regulatory impact analysis requirements of Texas Government Code, §2001.0225, and determined that the adopted 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 adopted rulemaking is intended to protect air quality in ozone nonattainment areas, it is not expected to have any material adverse affect 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 adopted rules is to increase the level of control for VOC storage in the DFW ozone nonattainment area. The adopted 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. The adopted 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 clarification specifies 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 adopted 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 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. 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. Because the increased stringency is economically feasible, the commission is adopting these rules to be implemented as RACT for VOC storage controls in the DFW ozone nonattainment area. The adopted rulemaking will 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 clarification specifies 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 adopted 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 adopted rules will 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 revisions that include specific enforceable 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 these rules are required by, and do not exceed, federal law. 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 adopted rules will be implemented as RACT for VOC storage in the DFW 1997 eight-hour ozone nonattainment area. The adopted rules 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 clarification specifies 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 invited public comment regarding the draft regulatory impact analysis determination during the public comment period. No comments were received on the draft regulatory impact analysis determination.

Takings Impact Assessment

The commission evaluated the adopted rulemaking and performed an assessment of whether Texas Government Code, Chapter 2007, is applicable. The adopted 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. The adopted rules 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 clarification specifies 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 adopted 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 adopted rules because this assessment 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 adopted rulemaking is to apply as RACT more stringent VOC storage tank control requirements in the DFW area to reduce VOC emissions from storage tanks. These requirements are control measures for VOC, a precursor of ozone, and are essential for attainment and maintenance of the ozone NAAQS. The adopted rules 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 adopted 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 adopted rulemaking.

Consistency with the Coastal Management Program

The commission reviewed the rulemaking and found that it 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 adopted rules in accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22 and found the rulemaking is consistent with the applicable CMP goals and policies.

The CMP goal applicable to the adopted 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 adopted 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 adopted rulemaking will not increase emissions of air pollutants and is therefore consistent with the CMP goal in §501.12(1) and the CMP policy in §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 adopted 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 §505.22(e), the commission affirms that this rulemaking action is consistent with CMP goals and policies.

The commission invited public comment regarding the consistency with the coastal management program during the public comment period. No comments were received regarding the consistency of this rulemaking with the coastal management program.

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. 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 adopted Chapter 115 requirements.

Public Comment

Public hearings on the proposal were held on July 14, 2011, at 10:00 a.m. and 6:30 p.m. at the Arlington City Council Chambers in Arlington; on July 18, 2011, at 6:30 p.m. at the Houston-Galveston Area Council offices in Houston; and on July 22, 2011, at 10:00 a.m. and 2:00 p.m. at the Texas Commission on Environmental Quality headquarters in Austin. The July 22, 2011, hearing scheduled for 10:00 a.m. was not officially opened because no party indicated a desire to provide comment. Oral comments regarding Chapter 115 were presented by Barnett Shale Energy Education Council (BSEEC), Earthworks Oil & Gas Accountability Project (Earthworks), Lone Star Chapter of the Sierra Club (LSCSC), and North Texas Clean Air Steering Committee (NT-CASC) and nine individuals.

Written comments regarding Chapter 115 were provided by BSEEC, COPPs for Clean Air (COPPs), Commissioners Court of Denton County (Denton), Emission Reduction Systems (ERS), KIDS for Clean Air (KIDS), LSCSC, NTCASC, REM Technology Inc (REM), Texas Oil and Gas Association (TX-OGA), Texas Pipeline Association (TPA), and the EPA and 370 individuals.

RESPONSE TO COMMENTS

General Comments

Comment

An individual expressed concern that the requirements of this rulemaking would place additional burdens on natural gas producers who are already attempting to minimize emissions.

Response

The commission is adopting these rules to implement FCAA RACT requirements for the storage of VOC in the DFW area. As discussed in the preamble for the proposed rulemaking (36 TexReg 3817, June 24, 2011), the commission determined these requirements are economically feasible and will not place an undue burden on owners or operators of storage tanks storing condensate. In many cases, owners or operators can choose a control device that will generate additional revenue or offset operational expenses. The commission makes no change in response to this comment.

Comment

EPA requested an explanation of the calculation methodology used to determine any credit that may be taken for emission reductions from this rule in the reasonable further progress or attainment demonstration SIP. In particular, EPA requested an explanation of how the emission reduction credit has been appropriately prorated to reflect that many storage tanks may not be controlled until after the RFP or attainment deadline because of the extended period allowed for compliance.

Response

The commission proposed to control flash emissions from crude oil and condensate storage tanks, prior to custody transfer, in the DFW area with uncontrolled VOC emissions that equal or exceed 25 tpy because preliminary analysis indicated that additional VOC reductions were necessary to help meet FCAA RFP requirements. The commission has since determined that these additional VOC emission reductions are not necessary to meet RFP requirements. The commission is adopting requirements for VOC storage tanks in the DFW area as necessary to implement FCAA RACT requirements but is not taking credit for any emission reductions associated with this rulemaking. The commission makes no change in response to this comment.

Comment

TPA commented that regulatory efforts to attain the ozone NAAQS should not focus on VOC emissions. TPA commented that the need for increased controls on VOC emissions has not been demonstrated through the use of reliable data. The HARC51C VOC emission factor of 33.3 lb/bbl of condensate is based on faulty data and is being applied by TCEQ for all condensate production regardless of the separator letdown pressure at the site or whether the flash emissions are being controlled. The November 2010 Eastern Research Group (ERG) study should not be the basis for any additional controls on VOC emissions because it greatly overstates statewide VOC emissions from oil and gas production sources by relying on the 33.3 lb/bbl emission factor and the unfounded assumption that emissions are not controlled by flares or vapor recovery units.

Response

The commission is adopting this rulemaking to fulfill the FCAA requirement to implement RACT for major sources of VOC emissions in the DFW area. The commission's Point Source Emissions Inventory includes storage tanks with VOC emissions that exceed the 50 tpy major source threshold for areas classified as serious for the 1997 eight-hour ozone standard and therefore these rules are necessary to fulfill FCAA RACT requirements at these sites. The commission is not relying on information from the HARC 51C study or the 2010 ERG study to demonstrate the necessity of this rulemaking.

The commission is continuing to use the HARC51C emission factor of 33.3 lb/bbl of condensate in this rulemaking. The production-based applicability threshold (barrels per year) for the requirement to control flash emissions from condensate storage tanks in the DFW area is based on the HARC51C emission factor of 33.3 lb/bbl of condensate. This emission factor is an average of a wide range of test results and provides a conservative estimate of the production threshold below which a regulated entity is exempt from demonstrating that the uncontrolled VOC emissions from an affected storage tank or tank battery are below 50 tpy. Above this production threshold, the regulated entity must demonstrate that the uncontrolled VOC emissions from the affected storage tank or tank battery are below 50 tpy or install controls in accordance with the rule requirements. The commission acknowledges that, in some cases, the factor may overestimate VOC emissions, which is one reason why the rule provides the regulated entity with the alternative to use direct measurement or approved computer simulations to demonstrate that the VOC emissions from the condensate storage tank or tank battery are less than 50 tpy. This process allows owners or operators the choice of using the most accurate data, which comes with additional expense, or the 33.3 lb/bbl emission factor. Direct measurements made for submission to the Barnett Shale Special Inventory may be used if the measurements were made with the measuring instruments and methods specified in §115.117. Likewise, other test methods or computer simulations approved by the executive director may be used. Computer simulations used to demonstrate compliance with the rule must account for differences in separator pressure. Regardless of the emission estimation method, the regulated entity must update the estimate of uncontrolled emissions if additional wells are connected to the storage tank or tank battery that increase throughput. The commission makes no change in response to this comment.

Comment

BSEEC commented that condensate tanks in the DFW area emit significantly less than the 33 lb/bbl emission factor used in this rulemaking. Data from the Barnett Shale Special Inventory Phase Two should be used to estimate the amount of VOC emissions from condensate storage tanks in this rulemaking. Alternatively, separate emission factors should be used for high pressure (over 200 psia) and low pressure (less than 50 psia) separators producing condensate. Use of voluntary controls such as vapor recovery units and flares by most operators has not been considered by the commission in estimating VOC emissions from storage tanks. The vast majority of production in the DFW area is dry natural gas with little to no VOC content. Therefore, there is little condensate storage in the area.

Response

As explained elsewhere in this section, the commission is adopting requirements for VOC storage tanks in the DFW area as necessary to implement FCAA RACT requirements but is not taking credit for any associated emission reductions. The commission is continuing to use the HARC51C emission factor of 33.3 lb/bbl of condensate in this rulemaking. The production-based applicability threshold (barrels per year) for the requirement to control flash emissions from condensate storage tanks in the DFW area is based on the HARC51C emission factor of 33.3 lb/bbl of condensate. This emission factor provides a conservative estimate of the production threshold below which a regulated entity is exempt from demonstrating that the uncontrolled VOC emissions from an affected storage tank or tank battery are below 50 tpy. Above this production threshold, the regulated entity has the

option to use site-specific emission factors generated by direct measurement or computer simulations to demonstrate that the uncontrolled VOC emissions from the affected storage tank or tank battery are below 50 tpy.

The commission continues to evaluate the Barnett Shale Special Inventory data at this time to assure data quality. However, new data from Phase II of the Barnett Shale Special Inventory indicate that a lower emission factor may be more representative of the average VOC emissions per barrel of condensate in the 23-county Barnett Shale area, which includes the DFW area. The commission acknowledges that, in some cases, the 33.3 lb/bbl emission factor may overestimate VOC emissions, which is one reason why the rule provides alternative options for demonstrating compliance. This process allows the regulated entity to use site-specific emission factors generated by direct measurement or computer simulations, which comes with additional expense, or use the 33.3 lb/bbl emission factor. Direct measurement and computer simulations will account for differences in separator pressure. Direct measurements made for submission to the Barnett Shale Special Inventory may be used if the measurements were made with the measuring instruments and methods specified in §115.117. The commission makes no change in response to this comment.

Comment

TPA commented that TCEQ should consult data recently collected during the Barnett Shale Special Inventory process. These data show that the total VOC inventory in the DFW area could be expected to amount to far less than the estimates reached in reports cited by TCEQ.

Response

The commission continues to evaluate the Barnett Shale Special Inventory data at this time to assure data quality. As explained elsewhere in this section, the commission is adopting this rulemaking to fulfill FCAA RACT requirements in the DFW area. The commission's Point Source Emissions Inventory includes storage tanks with VOC emissions that exceed the 50 tpy major source threshold for areas classified as serious for the 1997 eight-hour ozone standard and therefore these rules are necessary to fulfill FCAA RACT requirements at these sites. The commission makes no change in response to this comment.

Comment

BSEEC commented that the Texas Railroad Commission may inaccurately apportion condensate production to gas wells. This inaccuracy is because the Railroad Commission allocates condensate recovered by salt water injection operators back to the wells where the produced water was generated. Since salt water injection operators have no way to determine which of the many wells that they service produced the "skim" condensate, it is often allocated to all wells contracted for water disposal by a salt water disposal operator. BSEEC and TPA commented that for dry gas wells with little or no VOC, this produced water does not contain any significant amount of condensate. There can be some "skim" condensate in the water produced at a wet gas well such as those in Wise, western Denton, and Parker Counties.

Response

The commission agrees that there may be little condensate stored in some tank batteries. However, there are other tank batteries in the DFW area with appreciable amounts of stored condensate. The commission's Point Source Emissions Inventory includes storage tanks with VOC emissions that exceed the

50 tpy major source threshold for areas classified as serious for the 1997 eight-hour ozone standard. The adopted rules apply to individual tanks and tank batteries. Controls are required for those tanks or tank batteries over the applicability threshold.

If a storage tank contains both produced water and condensate, it is a storage tank storing condensate. For such tanks storing condensate prior to custody transfer, §115.112(d)(4) and (5) and (e)(4) and (e)(5) require vapors to be routed to a control device if uncontrolled VOC emissions from the individual storage tank or VOC emissions from the aggregate of all storage tanks in the tank battery exceed the applicability threshold. The commission makes no change in response to this comment.

Comment

BSEEC and TPA suggested that TCEQ evaluate if the proposed NSPS from EPA would make adoption of new requirements on condensate storage tanks in the DFW area a moot point. TPA suggested that TCEQ should ensure that regulated parties are not subject to conflicting federal and state rules on the subject of VOC storage emissions.

Response

Because the NSPS is in the proposal stage and is not yet an enforceable regulation, the commission cannot rely on any emission reductions or control strategies in that rule to satisfy current obligations under this rule package. Additionally, the control requirements for storage tanks in the proposed NSPS rule would only apply to new or modified existing sources and not to all existing major sources. Therefore, even if the EPA's proposed NSPS rule were adopted at this time, the commission could not rely upon the NSPS rule to satisfy RACT requirements, which must address all major sources. As discussed elsewhere in this preamble, the control requirements adopted with this rulemaking for crude oil and condensate tanks prior to custody transfer are necessary to fulfill RACT requirements of the FCAA for the 1997 eight-hour ozone standard DFW attainment demonstration SIP revision. The commission makes no change in response to this comment.

Comment

TPA disagreed that the fact that the controls have been installed on some facilities in some counties constitutes a global demonstration of economic feasibility. A more useful and realistic definition of "economic feasibility" would be one that takes into account the cost of the proposed measures balanced against the potential benefit of and need for them. TPA commented that the TCEQ was downplaying the fiscal impact of this rulemaking by stating that some of the proposed new 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." If it is the case that a substantial amount of product would be recovered through the proposed controls, such that the controls would pay for themselves, then companies can be expected to implement those technologies on their own, without the need for regulatory imperatives.

The technological feasibility of the proposed controls has not been demonstrated. TPA believed, however, that the study, TCEQ Project 2010-43, does not lend support to TCEQ's proposal as claimed. In that study, 316 HGB sources reported their control status, but only 109 - only about 1/3 - reported having employed any controls at all. TPA believed that such a small sampling should not be taken as any sort of proof as to the

technological or economic feasibility of the controls proposed by TCEQ in this rulemaking.

Response

The commission respectfully disagrees with TPA's assertion that the technological feasibility of the controls has not been demonstrated. The commission's study, TCEQ Project 2010-43, available at http://www.tceq.texas.gov/assets/public/implementation/air/am/contracts/reports/ei/5820784005FY1022-20100831-envirom-flash_emission.pdf, found that the reported controls for all storage tanks in the HGB, BPA, and Haynesville Shale areas were a vapor recovery unit, a flare, or both. Since the rule does not specify which control device technology is required, the information provided by survey respondents and the fact that these devices have been operating for multiple years clearly indicates that these devices are technologically feasible. The responses included 65% of HGB area condensate production, which is a substantial portion of the sampling universe. Of the respondents, 36% (88) of the tank batteries had installed controls. This survey indicates that only a minority of owners and operators are affected by the rule in the HGB area rather than indicating that a majority of applicable sites have failed to implement the rule due to issues with technological feasibility of vapor recovery units or flares. Of the respondents with installed controls, 40% (35) had installed the controls prior to the adoption date of the rule in the HGB area, and 60% installed the controls after the adoption date, presumably because of the rule. In order for a technology to be RACT, it does not need to be economically desirable, such that it is expected to be installed in all situations; rather it is required to be merely economically feasible, such that the expense of installing it is reasonable. The fact that owners or operators chose the same technologies for the additional 60% of the controls installed because of the rule in the HGB area supports the economic feasibility of these controls. Since upstream oil and gas storage tanks are not covered by a Control Techniques Guidelines or Alternative Control Techniques document from EPA, RACT controls cannot be defined below the major source threshold, which varies with the classification of the nonattainment area. The commission contends that vapor recovery units and flares are technologically and economically feasible when applied to storage tanks storing condensate prior to custody transfer with uncontrolled VOC emissions over 25 tpy, including sources affected by the current rule in the HGB area, where the major source threshold is 25 tpy, and sources affected by the adopted rule in the DFW area, where the major source threshold is 50 tpy. The commission makes no change in response to this comment.

Comment

TPA commented that the need to impose additional controls on minor sources has not been demonstrated. It is inappropriate to subject minor sources to the proposed requirements without a demonstrated need for the additional emissions reduction from sources below major source levels.

Response

In response to comment and because additional reductions from this rulemaking are not required for RFP purposes, the commission has raised the applicability threshold for storage tanks storing condensate and crude oil to the major source threshold. The DFW area is currently classified as a serious nonattainment area for the 1997 eight-hour ozone standard with a major source threshold of 50 tpy of uncontrolled VOC emissions. The FCAA

requires that SIP revisions include application of RACT to major sources of VOC in the DFW area. If the DFW area is reclassified to severe nonattainment, the commission is including a provision in §115.119(b)(1)(C) that adjusts the applicability threshold to match the lower 25 tpy major source threshold.

Comments on §115.110, Applicability and Definitions

Comment

TXOGA requested the addition of refined products, such as gasoline and distillates, to the list of materials handled by pipeline breakout stations, as defined in §115.110(5).

Response

The term *pipeline breakout station*, defined in §115.110(5), is used in Chapter 115, Subchapter B, Division 1 in the context of crude oil and condensate storage. The requested list of refined products is not needed to understand the meaning of the definition as it is applied in this division and could create confusion regarding the applicability of the rule if the definition was revised as requested. The commission makes no change in response to this comment.

Comment

An individual commented that the exemptions in §115.111(a)(3), (b)(3), and (d)(2) for storage tanks with storage capacity less than 25,000 gallons located at motor vehicle fuel dispensing facilities were unclear and questioned whether a motor vehicle fuel dispensing facility also included equipment at sites with other primary functions, such as fueling islands at trucking companies. The commenter pointed out that Chapter 115 did not have a definition of "motor vehicle fuel dispensing facility" and requested that the commission define or clarify the term. The commenter also suggested clarification as to whether the amount of fuel dispensed is a factor in the exemption.

Response

The definition of motor vehicle fuel dispensing facility in §101.1 applies to this division. It includes all sites where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks, whether dispensing fuel is the sole purpose or an ancillary purpose of the site. The definition only includes gasoline and therefore excludes diesel and other fuels commonly dispensed to trucks. Storage tanks are exempt from the requirements of this division if the storage capacity is less than 25,000 gallons. The exemption is not dependent upon the amount of gasoline dispensed. The commission makes no change in response to this comment.

Comment

An individual commented that the term produced water was not defined in §115.10 or §101.1 and questioned if the commission considered produced water and condensate to be interchangeable.

Response

The commission has not defined the phrase *produced water* in either Chapter 101 or Chapter 115 and uses its common meaning in the fields of crude oil and natural gas production and air pollution control. The EPA defines produced water applicable in offshore oil and gas production in 40 CFR §435.11(bb) as "*Produced water means the water (brine) brought up from the hydrocarbon-bearing strata during the extraction of oil and gas, and can include formation water, injection water, and any chemicals added down hole or during the oil/water separation process.*"

This definition differs from the definition of condensate 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 considered condensates.*" The definition of condensate implies that it is a liquid hydrocarbon, unlike water. The commission does not consider the terms "produced water" and "condensate" interchangeable for the purposes of this rule. Owners or operators storing produced water and condensate, crude oil, or other VOCs in the same storage tank must consider the amount, vapor pressure, and VOC emissions of condensate, crude oil, or other VOCs in determining applicability of this division. The commission makes no change in response to this comment.

Comment

An individual questioned if a fracking tank is considered to be a container or otherwise included in the definition of storage tank in §115.110(b)(11).

Response

A storage tank is defined in §115.110(b)(11) as 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; sub-surface caverns or porous rock reservoirs; or process tanks or vessels. Fracking tanks that have wheels and are transported from site to site to hold liquids during and shortly after temporary hydraulic fracturing operations are not stationary containers and are not considered storage tanks for the purposes of this division. If a tank designed to be permanently installed at a single location is used to store fracturing fluids containing VOC before a hydraulic fracturing operation or flowback fluids containing VOC after a hydraulic fracturing operation, such a tank would be considered to be a storage tank. The commission makes no change in response to this comment.

Comments on §115.111, Exemptions

Comment

An individual commented that salt water disposal wells typically receive comingled condensate and produced water with unknown minority amounts of condensate and large total volume annual throughput. The individual questioned whether the control requirement exemption for storage tanks or tank batteries in the DFW area with throughput exceeding 1,500 barrels per year and demonstrated uncontrolled emissions less than 25 tpy applied to throughput of condensate, produced water, or the mixture of both received by salt water disposal wells. The commenter also questioned whether a site with intermingled liquids would have to demonstrate that either the true vapor pressure of the liquid was less than 1.5 psia or the uncontrolled emissions were less than 25 tons to be exempt.

Response

Produced water can contain some VOC, including condensate and crude oil, thus affecting its true vapor pressure. If VOC are present, the tank is considered to be storing VOC. For stored liquids including produced water with true vapor pressure over 1.5 psia, Tables I(a), I(b), 1, and 2 of §115.112 contain control requirements including a submerged fill pipe or a vapor control system. If the produced water contains enough condensate that rises and covers the surface, it will vaporize as if the storage tank only contained condensate. The comingled condensate throughput of an individual produced water storage tank may be low enough that the uncontrolled emissions are below

the level to be exempt from the control requirements if the storage tank is located alone and not part of a larger tank battery. However, if the storage tank storing produced water comingled with crude oil or condensate is part of a tank battery containing storage tanks storing crude oil or condensate prior to custody transfer or at a pipeline breakout station with VOC emissions from all such storage tanks exceeding the threshold in §115.112(e)(5), vapors from the storage tank storing produced water comingled with condensate or crude oil must be routed to a vapor control system. The owner or operator can choose any of the emission estimation methods in §115.112(e)(6), including direct measurement, to determine VOC emissions. True vapor pressure must be determined according to §115.117(8). In response to comments, the commission is adding standard reference texts to the list of approved test methods. These include equations for determining the true vapor pressure of mixtures. Additionally, the commission is revising the phrasing of the exemptions and control requirements to clarify the commission's intent for the production-based (throughput) applicability threshold. The current language describes the applicability as 1,500 barrels of liquid throughput or 25 tpy in the HGB area, implicitly assuming that the 1,500 barrels are condensate with 33.3 lbs of VOC each. In response to comment, the commission is revising the exemptions in §115.111(a)(9) and (10), and the control requirement in §115.112(e)(4) to specify condensate throughput. This change explicitly states the commission's original intent as shown in June 8, 2007, issue of the *Texas Register* (32 TexReg 3180).

Comment

An individual requested clarification of how owners or operators storing condensate after custody transfer, including saltwater disposal injection wells, will be affected by this rulemaking. Particularly, the compliance schedule in the DFW area in §115.119 includes the phrase, 'prior to custody transfer', but §115.111 which exempts storage tanks or tank batteries storing condensate in the DFW area with liquid throughput over the throughput threshold and VOC emissions less than the VOC emission threshold from the requirement in §115.112 to control VOC emissions does not include the phrase 'prior to custody transfer'. The individual asked if §115.111 makes tank batteries at saltwater disposal injection wells in the DFW area subject to this division.

Response

The control requirement to route VOC vapors from storage tanks storing condensate with condensate throughput greater than the throughput threshold applies only to condensate storage prior to custody transfer. Likewise, when this provision exempts storage tanks or tank batteries with emissions below the emission threshold from the control requirement, it is exempting storage tanks storing condensate prior to custody transfer. Custody transfer is defined in §101.1 as "The transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation." If the comingled condensate and produced water have been transported by pipeline, truck, or other form of transportation to the injection well, the injection well is after custody transfer. Storage tanks storing condensate after custody transfer are not required to comply with §115.112(e)(4). In response to this comment, the commission is adding the phrase 'prior to custody transfer' to §115.111(a)(10) to clarify the intent that the control requirement and the exemption apply to the same storage tanks. A parallel

change is being made to the exemption in §115.111(a)(9) applicable in the HGB area. Storage tanks at saltwater disposal injection wells in the DFW and HGB areas are subject to this division; however, these tanks are not required to comply with provisions applicable to material stored prior to custody transfer.

Comment

An individual questioned whether the exemption in §115.111(a)(10) required analysis on a monthly basis to prove that total VOC emissions are less than the threshold on a rolling 12-month basis.

Response

Estimates of VOC emissions from storage tanks storing crude oil or condensate must be made according to §115.112(d)(5) or (e)(6), as applicable. These paragraphs specify all allowed measurement methods including direct measurement, approved test methods or computer simulations, emission factors, and a chart for crude oil production. Each of these methods estimate an amount of VOC emission per barrel of material stored. The rolling 12-month analysis in §115.111(a)(9) and (10) are to be made by applying this emission factor to the amount of material stored in the tanks each month and adding it to the estimated emissions from the previous 11 months. The commission makes no change in response to this comment.

Comments on §115.112, Control Requirements

Comment

EPA expressed support for 95% control of VOC emissions from storage tanks in the DFW area.

Response

The commission appreciates EPA's support for 95% VOC control in the DFW area.

Comment

REM technology commented that the proposal preamble did not include reciprocating internal combustion engines fired by natural gas used primarily for other purposes as potential control devices capable of controlling VOC vapors by over 95% from storage tanks storing crude oil and condensate.

Response

The commission appreciates the information that additional control devices potentially capable of meeting 95% control of VOCs are available. The commission is not specifying which control devices may be used to control VOC vapors from storage tanks storing crude oil and condensate prior to custody transfer. Elsewhere in this preamble, vapor recovery units and flares are mentioned as typical control devices used in this application; however, these devices are not the only control devices used or allowed. Owners or operators can use any control device capable of meeting the applicable design, minimum control efficiency, testing, and monitoring requirements. Certain commonly used control devices are listed with specific monitoring requirements, and §115.115(a)(6) specifies monitoring requirements for unlisted control devices. The commission makes no change in response to this comment.

Comment

LSCSC also commented that the City of Fort Worth's air quality study released July 13, 2011, showed few storage tanks or tank batteries with uncontrolled emissions over 25 tpy and far greater emission reduction potential from applying 95% control

to tanks with uncontrolled emissions less than 25 tpy. LSCSC, COPPs, KIDS, and 362 individuals commented that the commission should require 95% VOC control on storage tanks with condensate throughput of one barrel per day, or five tpy of VOC emissions and include the EPA-proposed controls on the other emission sources discussed in the EPA NSPS proposal for oil and natural gas production sites. LSCSC requested that the applicability threshold for control requirements on oil and gas storage tanks be lowered to five or ten tpy of VOC emissions because the City of Fort Worth's air quality study found few sites with emissions over 25 tpy. LSCSC stated that the emission reductions from the rule would be much greater with controls at five tpy. Two individuals commented that vapor recovery units should be required to capture and control all VOC emissions from all natural gas wells. One of the individuals suggested that vapor recovery units should be required on all natural gas wells in the entire state to reduce ozone concentrations, especially ozone in the DFW area.

Response

The commission respectfully disagrees with the applicability and control requirements suggested by the commenters. It is not technologically feasible to capture and control all VOC emissions from all natural gas wells. The proposed rulemaking specified a 25 tpy VOC threshold below which owners or operators would not be required to control VOC emissions from storage tanks storing condensate, which comes from natural gas wells. Lowering this threshold and including control requirements for natural gas well completions, pneumatic valves, or any other controls listed in EPA docket EPA-HQ-OAR-2010-0505 would affect owners or operators of additional storage tanks and processing equipment who have not been given the necessary notice and opportunity to comment on such a change. In response to other comments, the commission has chosen a 50 tpy applicability threshold, which is higher than the 25 tpy threshold that has been demonstrated to be technologically and economically feasible in the HGB area. The Texas Health and Safety Code, §382.017, prohibits the commission from adopting rules that require specific types of control equipment or manufacturing processes unless required by federal law or regulation. The commission must allow the use of any device capable of meeting the requirements. Furthermore, as control efficiencies rise significantly above 95% and concentration of VOC in the vent gas decreases, a control device utilizing combustion requires increasing amounts of supplemental fuel and produces increasing amounts of nitrogen oxides that contribute to increased ozone levels.

The commission is adopting the rule to require controls on storage tanks storing condensate and crude oil in the DFW area. In the HGB area, requirements for controls on these tanks already exist. Expanding the requirements to all other counties in Texas is outside the scope of this rulemaking. The commission cannot expand the rules at adoption to apply in other counties because those potentially affected owners and operators were not provided adequate notice and proper opportunity to comment on the rule. The commission makes no change in response to this comment.

Comment

NTCASC, Denton, and an individual commented that VOC emissions from storage tanks storing condensate or crude oil in the DFW area should be controlled by 95% if their emissions exceed a 15 tpy threshold. COPPs, KIDS, and 362 individuals recommended emission recovery controls on all newly fractured or

fractured natural gas well completions; dry seal systems on all centrifugal compressors; replacement of rod packing systems every 26,000 hours of reciprocating compressor operation; VOC emission limits for pneumatic valves controllers; and a requirement for strengthened leak detection and repair requirements at natural gas processing plants. NTCASC, Denton and an individual recommended formalizing current industry best practices, including recommended controls on natural gas well completions to recover emissions; control requirements specifying that all pneumatic valves regulating gas flow and pressure meet a low-bleed definition; and a requirement to use plunger lifts that use gas pressure buildup in a well to lift a column of accumulated fluid out of a well. LSCSC also recommends that other controls on other emission sources as required in the Oil and Gas PBR be included in this rulemaking. Earthworks stated the TCEQ could cut 114 tons per day (tpd) of VOC from the natural gas industry instead of the 14 tpd of VOC reductions proposed. An individual suggested that the fiscal impact of mandating these best practices would be offset by additional revenue generation.

Response

The commission appreciates the support for the 95% control requirement. The commission has not proposed controls of VOCs from storage tanks storing crude oil and condensate prior to custody transfer and at pipeline breakout stations down to a level of 15 tpy of VOC emissions, control requirements for natural gas well completions or recompletions, specified seal requirements for centrifugal compressors, maintenance requirements for rod packing on reciprocating compressors, emission limits for pneumatic valves, plunger lifts, or leak detection and repair requirements for natural gas processing plants. The commission has not proposed to include in this rulemaking all of the controls on oil and gas production sites in the TCEQ's standard permit for oil and gas sites. These potential controls are beyond the scope of this rulemaking and cannot be added at this point in the rulemaking process since necessary notice has not been provided to potentially affected persons. The commission has noted in the fiscal note of this rulemaking proposal published in the June 24, 2011, issue of the *Texas Register* (36 TexReg 3817), that some controls such as vapor recovery units would generate additional revenue for owners or operators. The commission acknowledges that some oil and gas companies have voluntarily implemented controls and practices to reduce VOC emissions, such as those recommended by the EPA in the Natural Gas Star Program. The TCEQ has revised Chapter 5 of the DFW attainment demonstration SIP revision (Project Number 2010-0220-SIP-NR) to formalize use of these practices by including discussion about the voluntary practices being employed by the oil and gas industry. The commission continues to study the amount and effects of VOC emission from these activities and may address these ideas in future rulemakings. The commission makes no change in response to this comment.

Comment

NTCASC and Denton requested that the commission review existing regulations to be sure that the regulations are adequate to achieve their intended purpose.

Response

The commission maintains these regulations adequately address the FCAA obligations. The commission continues to review existing regulations and may address additional ideas in future rulemakings. The commission makes no change in response to this comment.

Comments on §115.115, Monitoring Requirements

Comment

TXOGA requested that references to carbon adsorption system also include carbon adsorber because carbon adsorption system, as defined in §101.1(10), is limited to regenerative systems, whereas carbon adsorber, as defined in §101.1(9), includes activated carbon systems that are not regenerated on-site, such as carbon canisters.

Response

The commission acknowledges the unintended confusion in use of the phrase *carbon adsorption system* in §115.115(a)(3) and (b)(3) and §115.118(a)(5)(C) and has added the phrase *carbon adsorber* to these references in response to comment to properly account for the use of adsorbers such as carbon canisters that lack a system to regenerate the saturated adsorbent.

Comment

An individual commented that the commission has not, but should, conduct or require continuous monitoring and recording of actual VOC and hazardous air pollution emissions from all oil and natural gas sites and compare actual emissions with permit requirements, including PBR. Because the commission is not doing this, the individual asserts that the commission is encouraging these emissions by not enforcing and verifying compliance.

Response

This rule includes continuous monitoring requirements and recordkeeping requirements for appropriate operating parameters of control devices required on storage tanks with uncontrolled emissions over the threshold in §115.112(e). Required vapor control devices are designed to be the emission point for storage tanks and the operating parameters are chosen to assure that the devices are operating sufficient to meet applicable control requirements. The commission's compliance investigation staff perform inspections on oil and gas sites subject to this rule and checks required records, as appropriate, to determine compliance with all applicable commission rules, including permits claimed by or granted to the site. The commission vigorously enforces violations it finds. The commission makes no change in response to this comment.

Comments on §115.117, Approved Test Methods

Comment

TXOGA and ERS commented that Method 21 should be included in §115.117 as an approved test method.

Response

The commission agrees that Method 21 is an appropriate method for certain testing requirements in the rule and is adding Method 21 to the list of approved test methods in §115.117 in response to these comments. Owners or operators may use this method where appropriate to determine compliance with this division, such as measuring VOC concentrations to determine leaks, breakthrough of carbon adsorbers or carbon adsorption systems. However, Method 21 is not appropriate for testing the efficiency of certain control devices by measuring the inlet and outlet VOC concentrations because the specified devices do not have a linear response factor across the range of inlet and outlet VOC concentrations required to demonstrate a 90% or 95% control efficiency.

Comments on §115.118, Recordkeeping Requirements

Comment

EPA suggested additional recordkeeping is necessary for enforcement to show when a floating roof storage tank not in yet compliance with §115.112(e)(2) was last emptied and degassed in order to show that compliance was not necessary until an emptying and degassing event or December 1, 2021, whichever comes first.

Response

The commission agrees that additional recordkeeping will improve enforceability. The commission is adding a requirement to record the most recent instance of emptying or degassing the storage tank to §115.118(a)(6)(C) for sources relying on §115.119(a)(1)(A) and (b)(1)(A) to delay compliance for floating roof storage tanks in the DFW and HGB areas beyond March 1, 2013.

Comment

An individual requested that all copies of PBR submissions, test results, and everything done by the company should be publicly available and should be shared with local governments.

Response

The rulemaking includes requirements for owners or operators to maintain records of control device monitoring results, product throughput and emission estimates when claiming an exemption, and required testing conducted. Owners or operators must make these records available for review upon request by the EPA, state, and local air pollution control agencies with jurisdiction. The TCEQ has also discussed this rulemaking with local governments that are part of the North Texas Clean Air Steering Committee. In addition, the commission maintains ambient air monitors located throughout the state and hourly results of monitored ozone, VOC, and hazardous air pollutants are available to the public on the commission's Web site. Monitoring results in the Barnett Shale area can be found at <http://www.tceq.texas.gov/airquality/barnettshale/bshale-main>. The commenter's request to make all PBR submissions public is beyond the scope of this rulemaking. Documents submitted to the TCEQ for a PBR requiring registration are subject to public information requests. Documents describing the technical review of PBR submissions requiring registration are available on the TCEQ Web site at <http://www.tceq.texas.gov/permitting/air/remotedocs.html>. The commission makes no change in response to this comment.

Comments on §115.119, Compliance Schedules

Comment

TXOGA requested that the compliance schedule in §115.119 for the HGB area add changes in the monitoring requirements in §115.115 to the list of requirements with a compliance schedule of December 1, 2012.

Response

The commission agrees that some monitoring changes in §115.115 will require additional time to implement and is adding portions of new §115.115(a) to the compliance schedules for the HGB and DFW areas with a compliance date of March 1, 2013. The commission is granting additional time since the VOC reductions are no longer needed during 2012 for RFP purposes.

Comment

An individual commented that the proposed statement of compliance dates for the DFW area in proposed §115.119(c) and references to these dates in §115.111 created confusion and uncertainty about which exemptions apply prior to and after December 1, 2012.

Response

The commission's intent is to maintain rule language applicability until the compliance date for this rulemaking in certain subsections of this division and adopt new rule language applicable after the compliance date. In response to comment, the commission is replacing proposed references to the compliance date in §115.119 with the actual compliance date throughout §115.111 to §115.118 to improve readability and facilitate compliance.

Comment

TPA commented that it would not be possible for many companies to meet this deadline because of the extent of new controls that would have to be put in place to comply with the proposed rules. TPA asserted that the proposed controls, if adopted, would require a substantial amount of testing and alteration in many cases and that more time to comply would be needed.

Response

The commission has evaluated the amount of time that is necessary to comply with this rule and is extending the compliance deadline to March 1, 2013. This revision extends the amount of time allowed for installation of controls to give owners or operators a total of 14 months to comply and ensures that controls will be in place and operational by the beginning of the 2013 ozone season in the DFW area.

30 TAC §§115.110 - 115.119

Statutory Authority

The amendments and new sections are adopted 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; TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; 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 amended and new sections are also adopted 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; THSC, §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and THSC, §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 adopted 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 THSC, §382.021, concerning Sampling Methods and Procedures, that authorizes the commission to prescribe sampling methods. The amendments and new sections are also adopted 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.*

§115.111. 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), (9) - (11) of this subsection.

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

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

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

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

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

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

- (A) a mechanical shoe seal;
- (B) a liquid-mounted foam seal; or
- (C) a liquid-mounted liquid filled type seal.

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

- (A) a mechanical shoe seal;
- (B) a liquid-mounted foam seal; or
- (C) a liquid-mounted liquid filled type seal.

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

(9) In the Houston-Galveston-Brazoria area, a storage tank or tank battery storing condensate, as defined in §101.1 of this title (relating to Definitions), prior to custody transfer with a condensate throughput exceeding 1,500 barrels (63,000 gallons) per year on a rolling 12-month basis is exempt from the requirement in

§115.112(d)(4) or (e)(4)(A) of this title, to control flashed gases if the owner or operator demonstrates, using the test methods specified in §115.117 of this title (relating to Approved Test Methods), that uncontrolled VOC emissions from the individual storage tank, or from the aggregate of storage tanks in a tank battery, are less than 25 tons per year on a rolling 12-month basis.

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

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

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

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

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

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

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

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

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

- (A) a mechanical shoe seal;
- (B) a liquid-mounted foam seal; or
- (C) a liquid-mounted liquid filled type seal.

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

- (A) a mechanical shoe seal;
- (B) a liquid-mounted foam seal; or
- (C) a liquid-mounted liquid filled type seal.

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

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

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

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

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

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

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

§115.112. Control Requirements.

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

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

Figure: 30 TAC §115.112(a)(1)

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

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

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

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

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

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

(1) No person may place, store, or hold in any storage tank any VOC, other than crude oil or condensate, unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance

with the control requirements specified in Table I(b) of this paragraph for VOC other than crude oil and condensate.

Figure: 30 TAC §115.112(c)(1)

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

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

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

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

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

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

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

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

(2) For an external floating roof or internal floating cover storage tank 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 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 external floating roof drain that empties into the stored liquid must be equipped with a slotted membrane fabric

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

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

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

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

- (i) a pole wiper and pole float that has a seal or wiper at or above the height of the pole wiper;
- (ii) a pole wiper and a pole sleeve;
- (iii) an internal sleeve emission control system;
- (iv) a retrofit to a solid guidepole system;
- (v) a flexible enclosure system; or
- (vi) a cover on an external floating roof tank.

(H) The external floating roof or internal floating cover must be floating on the liquid surface at all times except as specified in this subparagraph. The external floating roof or internal floating 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 storage tank has been cleaned or as allowed under the following circumstances:

- (i) when necessary for maintenance or inspection;
- (ii) when necessary for supporting a change in service to an incompatible liquid;
- (iii) when the storage tank has a storage capacity less than 25,000 gallons or the vapor pressure of the material stored is less than 1.5 psia;
- (iv) when the vapors are routed to a control device from the time the floating roof 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, are less than 25 tons per year.

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

(4) For a storage tank storing condensate, as defined in §101.1 of this title, prior to custody transfer, flashed gases must be routed to a vapor control system if the liquid throughput through an

individual tank or the aggregate of tanks in a tank battery exceeds 1,500 barrels (63,000 gallons) per year.

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

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

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

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

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

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

(1) No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of this paragraph for crude oil and condensate. Figure: 30 TAC §115.112(e)(1)

(2) For an external floating roof or internal floating cover storage tank 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 must provide a projection below the liquid surface. Automatic bleeder vents (vacuum breaker vents) and rim space vents are not subject to this requirement.

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

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

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

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

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

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

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

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

(ii) a pole wiper and a pole sleeve;

(iii) an internal sleeve emission control system;

(iv) a retrofit to a solid guidepole system;

(v) a flexible enclosure system; or

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

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

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

(ii) when necessary for preventive maintenance, roof 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;

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

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

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

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

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

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

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

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

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

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

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

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

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

(B) in the Dallas-Fort Worth area:

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

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

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

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

(B) in the Dallas-Fort Worth area:

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

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

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

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

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

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

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

§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).

(1) For an internal floating cover storage tank, the internal floating cover 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 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; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage tank, within 60 days of the inspection the owner or operator shall repair the items or shall empty and degas the storage tank in accordance with Subchapter F, Division 3 of this chapter (relating to Degassing of Storage Tanks, Transport Vessels, and Marine Vessels).

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

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

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

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

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

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

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

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

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

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

(A) If during an inspection of an internal floating cover storage tank, the internal floating cover 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; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage tank, within 60 days of the inspection the owner or operator shall repair the items or shall empty and degas the storage tank.

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

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

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

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

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

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

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

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

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

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

(A) If during an inspection of an internal floating cover storage tank, the internal floating cover 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; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage tank, within 60 days of the inspection the owner or operator shall repair the items or shall empty and degas the storage tank.

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

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

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

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

§115.115. Monitoring Requirements.

(a) The following monitoring requirements apply in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions). An affected owner or operator shall install and maintain monitors to measure operational parameters of any of the following control devices installed to meet applicable control requirements. Such monitors must be sufficient to demonstrate proper functioning of those devices to design specifications.

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

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

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

(A) continuously monitor the exhaust gas VOC concentration of a carbon adsorption system that regenerates the carbon bed directly to determine breakthrough. For the purpose of this paragraph, breakthrough is defined as a measured VOC concentration exceeding 100 parts per million by volume above background expressed as methane. The owner or operator may conduct this monitoring using Method 21, as specified in §115.117 of this title (relating to Approved Test Methods), if the monitoring is conducted once every seven calendar days; or

(B) switch the vent gas flow to fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval determined by the maximum design flow rate and the VOC concentration in the gas stream vented to the carbon adsorption system or carbon adsorber.

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

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

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

(B) total volume of recovered vapors; or

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

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

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

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

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

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

§115.116. Testing Requirements.

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

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

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

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

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

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

§115.117. Approved Test Methods.

For the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions) and Gregg, Nueces, and Victoria Counties, compliance with the requirements in this division must be determined by applying the following test methods, as appropriate:

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

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

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

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

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

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

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

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

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

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

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

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

§115.118. Recordkeeping Requirements.

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

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

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

(3) The owner or operator shall maintain records of the results of inspections required by §115.114(a) of this title (relating to Inspection 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 maintain records of any operational parameter monitoring required in §115.115(a) of this title (relating to Monitoring Requirements). Such records must be sufficient to demonstrate proper functioning of those devices to design specifications and must include, but are not limited to, the following.

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

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

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

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

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

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

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

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

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

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

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

(B) The owner or operator of any storage tank that stores crude oil or condensate prior to custody transfer or at a pipeline breakout station and is not equipped with a vapor control system shall maintain records of the estimated uncontrolled emissions from the

storage tank on a rolling 12-month basis. The records must be made available for review within 72 hours upon request by authorized representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution control agency with jurisdiction.

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

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

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

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

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

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

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

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

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

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

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

§115.119. Compliance Schedules.

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

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

1, 2013, the owner or operator of a storage tank subject to §115.112(d) of this title shall continue to comply with §115.112(d) of this title until compliance has been demonstrated with the requirements of §115.112(e) of this title.

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

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

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

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

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

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

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

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

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

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

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

(c) In Hardin, Jefferson, and Orange Counties, the owner or operator of each storage tank in which any VOC is placed, stored, or

held was required to be in compliance with this division by March 7, 1997, and shall continue to comply with this division, except that compliance with §115.115(a)(3)(B), (5), and (6), and §115.116 of this title is required as soon as practicable, but no later than March 1, 2013.

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

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

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

This agency hereby certifies that the adoption has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on December 9, 2011.

TRD-201105425

Robert Martinez

Director, Environmental Law Division

Texas Commission on Environmental Quality

Effective date: December 29, 2011

Proposal publication date: June 24, 2011

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

◆ ◆ ◆
30 TAC §§115.115 - 115.117

Statutory Authority

The repeals are adopted 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; TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC; 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 repeals are also adopted 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; THSC, §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and THSC, §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 adopted 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 THSC, §382.021, concerning Sampling Methods and Procedures, that authorizes the commission to prescribe sampling methods. The repeals are also adopted 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 adopted repeals implement THSC, §§382.002, 382.011, 382.012, 382.016, 382.017, 382.021, and FCAA, 42 USC, §§7401 *et seq.*

This agency hereby certifies that the adoption has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on December 9, 2011.

TRD-201105426

Robert Martinez

Director, Environmental Law Division

Texas Commission on Environmental Quality

Effective date: December 29, 2011

Proposal publication date: June 24, 2011

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



SUBCHAPTER E. SOLVENT-USING PROCESSES

The Texas Commission on Environmental Quality (commission) adopts the repeal of §115.437; amendments to §§115.433, 115.435 and 115.439; and new §115.469, *without changes* to the proposed text and will not be republished. The commission adopts the amendments to §§115.422, 115.427, 115.429, 115.430, 115.432, and 115.436; and new §§115.431, 115.450, 115.451, 115.453 - 115.455, 115.458 - 115.461, 115.463 - 115.465, 115.468, 115.470, 115.471, 115.473 - 115.475, 115.478, and 115.479 *with changes* to the proposed text as published in the June 24, 2011, issue of the *Texas Register* (36 TexReg 3834).

The adopted 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 Adopted 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 from November 15, 1990, through 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 adopted Chapter 115 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 adopted rules expand rule applicability beginning March 1, 2013, to include flexible package printing lines that were previously exempt from the rules.

The EPA's 2006 Flexible Package Printing CTG recommends exempting 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 and 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

Figure: 30 TAC §115.112(a)(1)

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

True Vapor Pressure (pounds per square inch absolute (psia))	Storage Capacity (gallon (gal))	Control Requirements
≥ 1.5 psia and < 11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe or Vapor control system
≥ 1.5 psia and < 11 psia	> 25,000 gal and ≤ 40,000 gal	Internal floating cover, or External floating roof (any type), or Vapor control 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 control system
≥ 11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe or Vapor control system
≥ 11 psia	> 25,000 gal	Submerged fill pipe and Vapor control system

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

True Vapor Pressure (pounds per square inch absolute (psia))	Storage Capacity (gallon (gal))	Control Requirements
≥ 1.5 psia and < 11 psia	$> 1,000$ gal and $\leq 40,000$ gal	Submerged fill pipe or Vapor control 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 control system
≥ 11 psia	$> 1,000$ gal and $\leq 40,000$ gal	Submerged fill pipe or Vapor control system
≥ 11 psia	$> 40,000$ gal	Submerged fill pipe and Vapor control system

Figure: 30 TAC §115.112(c)(1)

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

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

Figure: 30 TAC §115.112(e)(1)

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

True Vapor Pressure (pounds per square inch absolute (psia))	Storage Capacity (gallon (gal))	Control Requirements
≥ 1.5 psia and < 11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe or Vapor control system
≥ 1.5 psia and < 11 psia	> 25,000 gal and ≤ 40,000 gal	Internal floating cover, or External floating roof (any type), or Vapor control 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 control system
≥ 11 psia	> 1,000 gal and ≤ 25,000 gal	Submerged fill pipe or Vapor control system
≥ 11 psia	> 25,000 gal	Submerged fill pipe and Vapor control system

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

True Vapor Pressure (pounds per square inch absolute (psia))	Storage Capacity (gallon (gal))	Control Requirements
≥ 1.5 psia and < 11 psia	$> 1,000$ gal and $\leq 40,000$ gal	Submerged fill pipe, or Vapor control 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 control system
≥ 11 psia	$> 1,000$ gal and $\leq 40,000$ gal	Submerged fill pipe, or Vapor control system
≥ 11 psia	$> 40,000$ gal	Submerged fill pipe, and Vapor control system

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:

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

$E_{1\text{Seal}}$ = 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.