

(2) The executive director will recommend measures to remedy any problems identified in the audit. The trading of discrete emission credits may be discontinued by the executive director in part or in whole and in any manner, with commission approval, as a remedy for problems identified in the program audit.

(3) The audit data and results will be completed and submitted to the EPA and made available for public inspection within six months after the audit begins.

(b) No later than February 1 of each calendar year, the executive director shall develop and make available to the general public and the EPA a report that includes:

(1) the amount of each pollutant emission credits generated under this division;

(2) the amount of each pollutant emission credits used under this division; and

(3) a summary of all trades completed under this division.

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

Filed with the Office of the Secretary of State on June 7, 2002.

TRD-200203535

Stephanie Bergeron

Director, Environmental Law Division

Texas Natural Resource Conservation Commission

Earliest possible date of adoption: July 21, 2002

For further information, please call: (512) 239-0348



### 30 TAC §§101.372 - 101.374

*(Editor's note: The text of the following sections proposed for repeal will not be published.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

#### STATUTORY AUTHORITY

These repealed sections are proposed under TWC, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, §382.017, concerning Rules, which authorizes the commission to adopt rules consistent with the policy and purposes of the TCAA. The new and amended sections are also proposed under THSC, §382.002, concerning Policy and Purpose, which establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to develop a general, comprehensive plan for control of the state's air; §382.014, concerning Emission Inventory, which authorizes the commission to require a person whose activities cause emissions of air contaminants to submit information to enable the commission to develop an emissions inventory; §382.016, concerning Monitoring Requirements, Examination of Records, which authorizes the commission to prescribe reasonable requirements for the measuring and monitoring of emissions of

air contaminants. These repealed sections are also proposed under 42 USC, §7410(a)(2)(A), which requires SIPs to include enforceable emission limitations and other control measures or techniques, including economic incentives such as fees, marketable permits, and auction of emission rights.

These proposed repealed sections implement THSC, §§382.002, 382.011, 382.012, 382.017; and 42 USC, §7410(a)(2)(A).

§101.372. *General Provisions.*

§101.373. *Protocols.*

§101.374. *Program Audits.*

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

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

The Texas Natural Resource Conservation Commission (commission) proposes amendments to §115.10 in Subchapter A, Definitions; §§115.120 - 115.123, 115.126, 115.127, 115.129, 115.142 - 115.144, 115.147, 115.149, 115.160, 115.161, 115.166, and 115.167 in Subchapter B, General Volatile Organic Compound Sources; §§115.211, 115.215, 115.219, 115.229, and 115.239 in Subchapter C, Volatile Organic Compound Transfer Operations; §§115.312, 115.326, 115.352, 115.354, 115.356, 115.357, and 115.359 in Subchapter D, Petroleum Refining, Natural Gas Processing, and Petrochemical Processes; and §§115.420, 115.421, 115.427, and 115.429 in Subchapter E, Solvent-Using Processes. The commission also proposed new §§115.170, 115.171, 115.173 - 115.176, 115.179, 117.180, 115.182 - 115.184, 115.186, and 115.189 in Subchapter B; and new §§115.720, 115.722, 115.723, 115.725 - 115.727, 115.729, 115.740 - 115.749, 115.760 - 115.767, 115.769, and 115.780 - 115.789 in new Subchapter H, Highly-Reactive Volatile Organic Compounds. These new and amended sections and corresponding revisions to the state implementation plan (SIP) will be submitted to the United States Environmental Protection Agency (EPA).

The proposed amendments to Chapter 115, concerning Control of Air Pollution from Volatile Organic Compounds, and revisions to the SIP would improve implementation of the existing Chapter 115 by adding requirements to achieve reductions in emissions of highly-reactive volatile organic compounds (VOC) in the Houston/Galveston (HGA) ozone nonattainment area, correcting typographical errors, updating cross-references, clarifying ambiguous language, adding flexibility, deleting obsolete language, and amending requirements to achieve the intended VOC emission reductions of the program.

The commission proposes these amendments to Chapter 115 and revisions to the SIP as essential components of, and consistent with, the SIP that Texas is required to develop under the Federal Clean Air Act (FCAA) Amendments of 1990 as codified in 42 United States Code (USC), §7410, to demonstrate attainment of the national ambient air quality standard (NAAQS) for ozone. In addition, 42 USC, §7502(a)(2), requires attainment as expeditiously as practicable, and 42 USC, §7511a(d), requires states to submit ozone attainment demonstration SIPs for severe ozone nonattainment areas such as HGA.

#### BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULES

The HGA ozone nonattainment area is classified as Severe-17 under the 1990 Amendments to the FCAA as codified in 42 USC, §§7401 *et seq.*, and therefore is required to attain the one-hour ozone standard of 0.12 part per million (ppm) by November 15, 2007. In addition, 42 USC, §7502(a)(2), requires attainment as expeditiously as practicable, and 42 USC, §7511a(d), requires states to submit ozone attainment demonstration SIPs for severe ozone nonattainment areas such as HGA. The HGA area, defined as Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties, has been working to develop a demonstration of attainment in accordance with 42 USC, §7410. On January 4, 1995, the state submitted the first of several Post-1996 SIP revisions for HGA.

The January 1995 SIP consisted of urban airshed model (UAM) modeling for 1988 and 1990 base case episodes, adopted rules to achieve a 9% rate-of-progress (ROP) reduction in VOCs, and a commitment schedule for the remaining ROP and attainment demonstration elements. At the same time, but in a separate action, the State of Texas filed for the temporary nitrogen oxides (NO<sub>x</sub>) waiver allowed by 42 USC, §7511a(f). The January 1995 SIP and the NO<sub>x</sub> waiver were based on early base case episodes which marginally exhibited model performance in accordance with EPA modeling performance standards, but which had a limited data set as inputs to the model. In 1993 and 1994, the commission was engaged in an intensive data-gathering exercise known as the Coastal Oxidant Assessment for Southeast Texas (COAST) study. The commission believed that the enhanced emissions inventory, expanded ambient air quality and meteorological monitoring, and other elements would provide a more robust data set for modeling and other analysis, which would lead to modeling results that the commission could use to better understand the nature of the ozone air quality problem in the HGA area.

Around the same time as the 1995 submittal, EPA policy regarding SIP elements and timelines went through changes. Two national initiatives in particular resulted in changing deadlines and requirements. The first of these initiatives was a program conducted by the Ozone Transport Assessment Group (OTAG). This group grew out of a March 2, 1995 memo from Mary Nichols, former EPA Assistant Administrator for Air and Radiation, that allowed states to postpone completion of their attainment demonstrations until an assessment of the role of transported ozone and precursors had been completed for the eastern half of the nation, including the eastern portion of Texas. Texas participated in the OTAG program, and OTAG concluded that Texas does not significantly contribute to ozone exceedances in the Northeastern United States. The other major national initiative that impacted the SIP planning process is the revision to the NAAQS for ozone. The EPA promulgated a final rule on July 18, 1997 changing the ozone standard to an eight-hour standard of 0.08

ppm. In November 1996, concurrent with the proposal of the standards, the EPA proposed an interim implementation plan (IIP) it believed would help areas like HGA transition from the old to the new standard. In an attempt to avoid a significant delay in planning activities, Texas began to follow this guidance, and readjusted its modeling and SIP development timelines accordingly. When the new standard was published, the EPA decided not to publish the IIP, and instead stated that, for areas currently exceeding the one-hour ozone standard, the one-hour standard would continue to apply until it is attained. The FCAA requires that HGA attain the one-hour standard by November 15, 2007.

The EPA issued revised draft guidance for areas such as HGA that do not attain the one-hour ozone standard. The commission adopted on May 6, 1998 and submitted to the EPA on May 19, 1998 a revision to the HGA SIP which contained the following elements in response to EPA's guidance: UAM modeling based on emissions projected from a 1993 baseline out to the 2007 attainment date; an estimate of the level of VOC and NO<sub>x</sub> reductions necessary to achieve the one-hour ozone standard by 2007; a list of control strategies that the state could implement to attain the one-hour ozone standard; a schedule for completing the other required elements of the attainment demonstration; a revision to the Post-1996 9% ROP SIP that remedied a deficiency that the EPA believed made the previous version of that SIP unapprovable; and evidence that all measures and regulations required by Subpart 2 of Title I of the FCAA to control ozone and its precursors have been adopted and implemented, or are on an expeditious schedule to be adopted and implemented.

In November 1998, the SIP revision submitted to the EPA in May 1998 became complete by operation of law. However, the EPA stated that it could not approve the SIP until specific control strategies were modeled in the attainment demonstration. The EPA specified a submittal date of November 15, 1999 for this modeling. In a letter to the EPA dated January 5, 1999, the state committed to model two strategies showing attainment.

As the HGA modeling protocol evolved, the commission eventually selected and modeled seven basic modeling scenarios. As part of this process, a group of HGA stakeholders worked closely with commission staff to identify local control strategies for the modeling. Some of the scenarios for which the stakeholders requested evaluation included options such as California-type fuel and vehicle programs as well as an acceleration simulation mode equivalent motor vehicle inspection and maintenance program. Other scenarios incorporated the estimated reductions in emissions that were expected to be achieved throughout the modeling domain as a result of the implementation of several voluntary and mandatory state-wide programs adopted or planned independently of the SIP. It should be made clear that the commission did not propose that any of these strategies be included in the ultimate control strategy submitted to the EPA in 2000. The need for and effectiveness of any controls which may be implemented outside the HGA eight-county area will be evaluated on a county-by-county basis.

The SIP revision was adopted by the commission on October 27, 1999, submitted to the EPA by November 15, 1999, and contained the following elements: photochemical modeling of potential specific control strategies for attainment of the one-hour ozone standard in the HGA area by the attainment date of November 15, 2007; an analysis of seven specific modeling scenarios reflecting various combinations of federal, state, and local controls in HGA (additional scenarios H1 and H2 build upon Scenario VI); identification of the level of reductions of VOC and

NO<sub>x</sub> necessary to attain the one-hour ozone standard by 2007; a 2007 mobile source budget for transportation conformity; identification of specific source categories which, if controlled, could result in sufficient VOC and/or NO<sub>x</sub> reductions to attain the standard; a schedule committing to submit by April 2000 an enforceable commitment to conduct a mid-course review; and a schedule committing to submit modeling and adopted rules in support of the attainment demonstration by December 2000.

The April 19, 2000 SIP revision for HGA contained the following enforceable commitments by the state: to quantify the shortfall of NO<sub>x</sub> reductions needed for attainment; to list and quantify potential control measures to meet the shortfall of NO<sub>x</sub> reductions needed for attainment; to adopt the majority of the necessary rules for the HGA attainment demonstration by December 31, 2000, and to adopt the rest of the shortfall rules as expeditiously as practical, but no later than July 31, 2001; to submit a Post-1999 ROP plan by December 31, 2000; and to perform a mid-course review by May 1, 2004.

The emission reduction requirements included as part of the December 2000 SIP revision represented substantial, intensive efforts on the part of stakeholder coalitions in the HGA area. These coalitions, involving local governmental entities, elected officials, environmental groups, industry, consultants, and the public, as well as the commission and the EPA, worked diligently to identify and quantify potential control strategy measures for the HGA attainment demonstration. Local officials from the HGA area formally submitted a resolution to the commission, requesting the inclusion of many specific emission reduction strategies.

A SIP revision for HGA was adopted by the commission on December 6, 2000 and submitted to the EPA by December 31, 2000. The December 2000 SIP contained rules, enforceable commitments, and photochemical modeling analyses in support of the HGA ozone attainment demonstration. In addition, this SIP contained Post-1999 ROP plans for the milestone years 2002 and 2005, and for the attainment year 2007. The SIP also contained enforceable commitments to implement further measures, if needed, in support of the HGA attainment demonstration, as well as a commitment to perform and submit a mid-course review.

In January 2001, the BCCA Appeal Group (BCCA-AG) and several regulated companies challenged the December 2000 HGA SIP and some of the associated rules. Specifically, the BCCA-AG challenged the 90% NO<sub>x</sub> reduction requirement from stationary sources in the HGA area. In May 2001, the parties agreed to a stay in the case, and Judge Margaret Cooper, Travis County District Court, signed a Consent Order, effective June 8, 2001, requiring the commission to perform an independent, thorough analysis of the causes of rapid ozone formation events and identify potential mitigating measures not yet identified in the HGA attainment demonstration, according to the milestones and procedures in Exhibit C (Scientific Evaluation) of the Consent Order.

On September 26, 2001, the commission adopted a revision to the December 2000 HGA SIP. This revision included changes to several previously adopted rules, removal of the construction equipment operating restriction and the accelerated purchase requirement for Tier 2/3 heavy duty equipment, and adjustments to the ROP and NO<sub>x</sub> gap to account for mathematical inconsistencies. The September 2001 SIP also laid out the mid-course review process by detailing how the state will fulfill its commitment to obtain the additional emission reductions necessary to demonstrate attainment of the one-hour ozone standard in HGA by 2007. Chapter 7 of the September 2001 SIP

described the options for reducing NO<sub>x</sub> emissions and the anticipated results from improvements to science between 2001 and the 2004 mid-course review.

In compliance with the Consent Order, the commission conducted a scientific evaluation based in large part on aircraft data collected by the Texas 2000 Air Quality Study (TexAQS). The TexAQS, a comprehensive research project conducted in August and September 2000 involving more than 40 research organizations and over 200 scientists, studied ground-level ozone air pollution in the HGA and east Texas regions. The study revealed that while NO<sub>x</sub> emissions from industrial sources were generally correctly accounted for, industrial VOC emissions were likely significantly understated in earlier emissions inventories. The study also showed that surface monitors were insufficient in capturing the phenomenon of ozone plumes downwind of industrial facilities. On four separate days, ozone levels exceeding 125 parts per billion (ppb) were recorded by aircraft instruments that were missed by surface monitoring equipment.

Preliminary results from the scientific evaluation of TexAQS data were summarized in a memorandum, dated February 28, 2002, which is available at [ftp://ftp.tceq.state.tx.us/pub/AirQuality/AirQualityPlanningAssessment/Modeling/HGAQSE/Reports\\_2\\_002Feb/TNRCC/exsummary\\_20020228.pdf](ftp://ftp.tceq.state.tx.us/pub/AirQuality/AirQualityPlanningAssessment/Modeling/HGAQSE/Reports_2_002Feb/TNRCC/exsummary_20020228.pdf). Analysis showed that plumes stemming from HGA's industrial areas produce ozone very rapidly due to the collocation of large NO<sub>x</sub> and VOC emissions from industrial facilities. Initial efforts were focused on the most remarkable findings - that a select number of highly reactive VOCs - ethylene, propylene, and 1, 3 butadiene contributed to very large portions of reactivity observed airborne samples, and were previously underreported in the emissions inventory used in the December 2000 HGA SIP. As scientists completed more detailed analyses, other reactive VOCs, including isoprene, butenes, formaldehyde, acetaldehyde, toluene, pentenes, trimethylbenzenes, xylenes, and ethyltoluenes may be found to possibly contribute to ozone production in HGA. Other scientists also may have indicated that large amounts of less reactive VOC emissions have contributed to ozone production in HGA. At this time, commission staff has not been able to analyze the role of these additional VOCs in ozone production in HGA, but plans to conduct that analysis prior to the mid-course review SIP revision. This study concluded that controls on upsets and routine industrial VOC emissions are necessary to address some of the elevated ozone levels observed in HGA.

In order to address recent scientific findings and to fulfill the BCCA-AG Consent Order, the commission is proposing revisions to the industrial source control requirements, one of the control strategies within the existing federally approved SIP. This revision contains new rules to reduce emissions of highly-reactive VOCs from four key industrial sources: fugitives, flares, process vents, and cooling towers. Current inventory indicates that approximately 48% of the highly reactive VOCs come from fugitives, 30% from flares, 8% from vents, and 7% from cooling towers. More details about these controls are included in the Section by Section Discussion of this preamble.

Technical support documentation accompanying this revision contains early results from on-going analysis examining whether reductions in emissions of highly-reactive VOCs can replace the last 10% of industrial NO<sub>x</sub> controls, while maintaining the integrity of the SIP by ensuring that the air quality specified in the approved December 2000 HGA SIP continues to be met.

Several detailed analyses provide some directional support for the premise that it may be possible to achieve the same level of air quality benefits with reductions in industrial olefin emissions, combined with an 80% reduction in NO<sub>x</sub> emissions from industrial sources, as would be realized with a 90% reduction in industrial NO<sub>x</sub> emissions. This preliminary indication is based on new analysis of the September 1993 episode using advanced meteorological models combined with a top-down adjustment to the point source olefin emissions; modeling of a new 2000 episode, also using a top-down adjustment to point source olefin emissions; and results from a sophisticated box model, which was set up to replicate actual air samples taken during the study.

The September 8 - 11, 1993 episode was modeled using three meteorological methods: Systems Applications International Mesoscale Model (SAIMM), Mesoscale Model 5 (MM5), and Regional Atmospheric Modeling System (RAMS). Sensitivity analysis indicated that it may be possible to substitute the last 10% of point source NO<sub>x</sub> reductions if olefin emissions in the model are six times as large as in the original modeling demonstration. With the scaled-up olefin emissions in the model, the required olefin reduction from industrial sources varied from approximately 27% to 90%.

The August 25 - September 1, 2000 episode was also modeled, incorporating numerous improvements in science made since the December 2000 HGA SIP. Key among the improvements was the use of the state-of-the-science MM5 meteorological model, an upgraded emissions inventory, and several other enhancements. Interpolation of results for August 25, 29, and 31, 2000 indicated that the last 10% of NO<sub>x</sub> reductions can potentially be replaced with industrial source olefin reductions. The required olefin reductions from industrial sources varied from approximately 8% to 27%. Note that the 2000 episode is under development, and these reduction percentages may change.

A complex box model simulation was set up to replicate the chemical composition in actual air samples taken from the Houston Ship Channel area during the TexAQS. This box model used the National Center for Atmospheric Research (NCAR) Master Mechanism (Madronich), which includes 800 species of hydrocarbons and 2200 reactions, and is recognized as one of the most complete chemistry models available to scientists studying air quality problems. Results from this model also indicated that the last 10% of NO<sub>x</sub> reductions might be able to be replaced with industrial olefin reductions.

Analysis also demonstrated that reductions of highly-reactive VOCs from industrial sources ranging from 4% to 54%, combined with an 85% NO<sub>x</sub> industrial reduction, could potentially achieve the same levels of air quality improvement as a 90% NO<sub>x</sub> reduction.

The proposed rules target highly-reactive VOCs while maintaining the integrity of the SIP. Analysis to date shows that limiting highly-reactive VOCs to 100 tons per day (tpd) in conjunction with an 80% reduction in NO<sub>x</sub> may lead to air quality benefits equivalent to that resulting from a 90% point source NO<sub>x</sub> reduction requirement. The commission recognizes that these results are only preliminary and that further work will be needed to increase confidence in them. As such, the proposed highly-reactive VOC rules are performance-based, emphasizing monitoring, record-keeping, reporting, and enforcement rather than immediately establishing firm emissions reductions targets in tpd. The proposed rules are intended to facilitate the collection of emission inventory

data by industry over the next few months, to be used to evaluate whether emissions specifications from preliminary results are appropriate. This data will also help the commission understand the role of the other reactive VOCs (isoprene, butenes, formaldehyde, acetaldehyde, toluene, pentenes, trimethylbenzenes, xylenes, ethyltoluenes) found to contribute to ozone production in the HGA area. The role of large amounts of less reactive VOC emissions in ozone production will also be investigated through the summer of 2002. Over the next few months, the commission plans to perform new modeling, develop a conceptual description of the ozone problem, and identify additional improvements to supplement the conclusions made to date based on initial results. It is anticipated that by the December 2002 adoption, there will be additional technical support in order to allow the commission to make a final determination, which may lead to adjustments in emission specifications.

As discussed in Chapter 7 of the HGA SIP, this revision is another phase in the process of continued analysis and review of the science. The data collected as a result of these revisions will further assist the commission as it develops its full reassessment of the attainment demonstration at the mid-course review.

The proposed rules both address recent scientific findings and fulfill the BCCA-AG Consent Order, by proposing to implement measures to mitigate the rapid ozone formation in the HGA area according to the milestones established in Exhibit C of the Consent Order. As noted earlier, these rules are based on preliminary data and therefore focus on accelerated monitoring, record-keeping, reporting, and enforcement in order to build the science. By the adoption date, the commission intends to have better data and greater confidence in the exact emissions reductions requirements required to control highly reactive VOCs while maintaining the integrity of the SIP.

## SECTION BY SECTION DISCUSSION

Formatting, punctuation, and other non-substantive corrections are made throughout the rulemaking as necessary. These corrections include the deletion of unnecessary section title references. These non-substantive corrections will not be discussed further.

### *Subchapter A, Definitions*

The proposed amendments to §115.10, concerning Definitions, add a definition of "background" which is based upon the requirements of Test Method 21 in 40 Code of Federal Regulations (CFR) 60, Appendix A. This term is used in the current Subchapter D, Division 2, Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties, and Division 3, Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas, as well as the new Subchapter H, Highly- Reactive Volatile Organic Compounds, Division 4, Fugitive Emissions. Subsequent definitions are proposed to be renumbered to accommodate the new definition.

The proposed amendments to §115.10 also add a definition of "closed-vent system" which is based upon the corresponding definition in 40 CFR §60.481. The new definition is necessary because this term is used in the new Subchapter H, Highly- Reactive Volatile Organic Compounds, Division 4, Fugitive Emissions.

In addition, the proposed amendments to §115.10 add a definition of "connector" which includes flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of equipment. Joined fittings welded completely around

the circumference of the interface are not included, however, because they would not be expected to leak if the fitting is competently welded. In a related action, the proposed amendments to §115.10 also revise the definition of "component" to include connectors. However, these proposed amendments do not expand the scope of the existing leak detection and repair (LDAR) requirements because connectors already meet the current definition of component, which is "a piece of equipment, including, but not limited to pumps, valves, compressors, and pressure relief valves, which has the potential to leak VOC." While connectors are not explicitly listed in the current definition of component, they are pieces of equipment that have the potential to leak VOC. Furthermore, the list of components in this definition is not an all-inclusive list, as evidenced by the statement "including, but not limited to."

In addition, the proposed amendments to §115.10 add a definition of "highly-reactive volatile organic compound (VOC)." This new definition includes acetaldehyde; 1,3-butadiene; all butenes (butylenes); ethylene; all ethyltoluenes; formaldehyde; isoprene; all pentenes; propylene; toluene; all trimethylbenzenes; and all xylenes. This new definition is necessary for the new Subchapter H which applies to highly-reactive VOC.

The proposed amendments to §115.10 also add definitions of "heavy liquid" and "light liquid" which are consistent with the usage of these terms in the current fugitive monitoring rules of Subchapter D, Petroleum Refining, Natural Gas Processing, and Petrochemical Processes, Division 2 (concerning Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties) and Division 3 (concerning Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas).

In addition, the proposed amendments to §115.10 relocate the definition of "liquefied petroleum gas" so that it will be in alphabetical order. The proposed amendments to §115.10 also add a definition of "metal-to-metal seal." This is a type of connector which commission staff has determined is as effective as a flanged connection. The new definition is necessary for the proposed amendments to §115.352(8), concerning Control Requirements, described later in this preamble.

The proposed amendments to §115.10 also add definitions of: pressure relief valve; process drain; rupture disk; shutdown or turnaround; and startup. The proposed definitions are consistent with the usage and intent of these terms in the current fugitive monitoring rules of Subchapter D, Divisions 2 and 3.

Finally, the proposed amendments to §115.10 revise the definition of "synthetic organic chemical manufacturing process" to update the reference to the list of chemicals in 40 CFR §60.489. This revision is necessary to reflect the revisions published in the October 17, 2000 issue of the *Federal Register* (65 FR 61763). No changes in the Chapter 115 rule requirements will occur as a result of updating the reference to the chemical list, because the changes that the EPA made to this list were non-substantive corrections of typographical errors, as follows: the chemical name "chlorobenzoyl chloride" was corrected to "chlorobenzoyl chloride"; the chemical name "chloronaphthalene" was corrected to "chloronaphthalene"; the Chemical Abstracts Service (CAS) number for diethylene glycol monobutyl ether acetate was corrected to "124-17-4"; the chemical name "ethylene carbonate" was corrected to "ethylene carbonate"; the chemical name "ethylene glycol monoethyl ether" was corrected to "ethylene glycol

monoethyl ether"; the chemical name "propionaldehyde" was corrected to "propionaldehyde"; and the chemical name "tetrahydronaphthalene" was corrected to "tetrahydronaphthalene."

#### *Subchapter B, General Volatile Organic Compound Sources*

##### *Division 2, Vent Gas Control*

The proposed amendment to §115.120, concerning Vent Gas Definitions, deletes unnecessary section title references.

The proposed amendment to §115.121, concerning Emission Specifications, adds a new §115.121(a)(4) which specifies that any vent gas stream in HGA which includes a highly-reactive VOC is subject to the requirements of the new Subchapter H, concerning Highly-Reactive Volatile Organic Compounds, in addition to the applicable requirements of Division 2 of Subchapter B. This new paragraph is necessary to make it clear that the requirements of the new Subchapter H apply in addition to, rather than in place of, the requirements of Division 2.

The proposed amendment to §115.122, concerning Control Requirements, deletes language in §115.122(a)(3)(A) and (B) which is obsolete due to the passing of December 31, 2000 and December 31, 2001 compliance dates.

The proposed amendments to §115.123, concerning Alternate Control Requirements, replace a reference to "the effective date of the applicable paragraphs of this division" in §115.123(a)(2) with the actual date (December 3, 1993), and add the *Federal Register* publication date of federal regulations. The proposed amendments to §115.123(a)(2) also specify that the alternate reasonably available control technology (ARACT) determination is for synthetic organic chemical manufacturing industry (SOCMI) reactor processes or distillation operations. In addition, the proposed amendments to §115.123(a)(2) replace references to "the applicable rule(s)" with references to the specific rule (§115.122(a)(2)).

The proposed amendment to §115.126, concerning Monitoring and Recordkeeping Requirements, revises the record retention time from two years to five years for consistency. The sources subject to Chapter 115 are also subject to FCAA Title V permit requirements, which specify a five-year period for retention of compliance records.

The proposed amendments to §115.127, concerning Exemptions, delete the current §115.127(a)(2)(C) because it is obsolete due to the passing of an April 15, 2001 compliance date, and reletter the current §115.127(a)(2)(D) and (E) as §115.127(a)(2)(C) and (D). In addition, the proposed amendments to §115.127 update references to federal rules in §115.127(a)(4)(D) and (E).

The proposed amendments to §115.129, concerning Counties and Compliance Schedules, delete the current §115.129(b), (c), (f), and (g) because these subsections are obsolete due to the passing of December 31, 2000 and December 31, 2001 compliance dates, and reletter the current §115.129(d) and (e) as §115.129(b) and (c).

#### *Subchapter B, General Volatile Organic Compound Sources*

##### *Division 4, Industrial Wastewater*

The proposed amendments to §115.142, concerning Control Requirements, revise §115.142(1)(A) to prohibit the use of VOC, rather than water, as the sealing liquid in water seals. This is

necessary to address a situation in which VOC was used in a water seal, thereby resulting in unnecessary emissions. The proposed amendments to §115.142(1)(A) also specify that a gasketed seal, or a tightly-fitting cap or plug is required on process drains not equipped with water seals. This is necessary because if not properly sealed, process drains can have a relatively high flow rate in air volume coming out of them, resulting in uncontrolled VOC emissions.

In addition, the proposed amendments to §115.142 revise §115.142(1)(D)(ii)(II)(-b-) by deleting the requirement for a demonstration that water seal controls are functioning properly, and relocating it to §115.144, concerning Inspection and Monitoring Requirements, where it is more appropriately located.

The proposed amendments to §115.142 also revise §115.142(1)(H) by adding a more explicit repair schedule for components found to be leaking and a requirement for verifying that adequate repairs have been made. This is necessary because fugitive emissions from inadequate repairs could continue for an extended period.

Finally, the proposed amendments to §115.142 revise §115.142(4) by replacing the outdated term "standard exemption" with the correct term "permit by rule" and correcting the reference to the Chapter 106 title to "Permits by Rule."

The proposed amendment to §115.143, concerning Alternate Control Requirements, updates a reference to a federal rule in §115.143(c).

The proposed amendments to §115.144 add a new §115.144(5) which includes the relocated language from §115.142(1)(D)(ii)(II)(-b-), as well as a new requirement that water seals be inspected on a daily basis to ensure that the water seal controls are properly designed and restrict ventilation. This new requirement is necessary for the following reasons. Commission staff has found that many process drains are configured with u-shaped P-traps that use a water seal as control technology. Many process drains receive high-temperature material or steam condensate, and any water in the drain seals is quickly evaporated. These drains then have a relatively high flow rate in air volume coming out of them, resulting in uncontrolled VOC emissions. If found leaking during an annual monitoring check, commission staff has found that an owner or operator can simply pour water in the drain and ignore it for another year. In April 2000, commission staff monitored the process drains in an ethylene unit and found readings as high as 2,000 parts per million by volume (ppmv) on process drains that were all equipped with water seal technology but no water seal. In many cases, emissions are recurring within hours of filling the drains. Consequently, some of these drains leak most of the year, and therefore the commission is proposing this more frequent inspection schedule.

The proposed amendments to §115.144 add a new §115.144(6) which specifies that process drains not equipped with water seal controls must be inspected weekly to ensure that all gaskets, caps, and/or plugs are in place and that there are no gaps, cracks, or other holes in the gaskets, caps, and/or plugs. This is necessary because if not properly sealed, process drains can have a relatively high flow rate in air volume coming out of them, resulting in uncontrolled VOC emissions. In addition, the proposed §115.144(6) specifies that caps or plugs must be inspected weekly. This is necessary because in some cases the caps or plugs are only finger-tight, thereby resulting in leaks. While the caps or plugs could vibrate loose, a weekly inspection

schedule is expected to be adequate because this will occur more slowly than the drying out of water seals.

The proposed amendment to §115.147, concerning Exemptions, revises §115.147(3) to specify that the requirements of Subchapter D, Division 3, and Subchapter H apply in addition to the requirements of Subchapter B, Division 4. This revision is necessary to ensure that components of a wastewater system which are intended to be subject to Subchapter D, Division 3, and Subchapter H are not inadvertently exempted by §115.147(3).

The proposed amendments to §115.149, concerning Counties and Compliance Schedules, add a new §115.149(e) which specifies an April 30, 2003 compliance date for the new requirement in §115.142(1)(A) for gasketed seals or a tightly-fitting cap or plug on process drains not equipped with water seal controls.

The proposed amendments to §115.149 also add a new §115.149(f) which specifies an April 30, 2003 compliance date for the new requirements in §115.142(1)(H) for a first attempt at repair within five calendar days and followup monitoring and inspection.

In addition, the proposed amendments to §115.149 add a new §115.149(g) which specifies an April 30, 2003 compliance date for the new requirements in §115.144(4) and (5) for daily water seal inspections and weekly inspections of process drains not equipped with water seals.

#### *Subchapter B, General Volatile Organic Compound Sources*

##### *Division 6, Batch Processes*

The proposed amendments to §115.160, concerning Batch Process Definitions, delete the definition of "semi-continuous" in §115.160(13) because this term is not used in Subchapter B, Division 6. It should be noted that semi-continuous processes are noncontinuous processes and therefore meet the definition of "batch" in §115.160(4). Consequently, semi-continuous processes will continue to be subject to the batch process requirements contained in this division after the deletion of the definition of "semi-continuous." The proposed amendments to §115.160 also renumber the current §115.160(14) and (15) as §115.160(13) and (14) due to the proposed deletion of the definition of "semi-continuous" in the current §115.160(13).

The proposed amendment to §115.161, concerning Applicability, adds a new §115.161(c) to make it clear that the requirements of the new Subchapter H apply in addition to, rather than in place of, the applicable requirements of either Divisions 2 or 6 of Subchapter B.

The proposed amendment to §115.166, concerning Monitoring and Recordkeeping Requirements, revises the record retention time from two years to five years for consistency. The sources subject to Chapter 115 are also subject to FCAA Title V permit requirements, which specify a five-year period for retention of compliance records.

The proposed amendments to §115.167, concerning Exemptions, revise §115.167(1) and (2) by adding references to the proposed new §115.161(c). This is necessary to make it clear that the requirements of the new Subchapter H apply in addition to, rather than in place of, the requirements of Division 6 of Subchapter B, and further, that the requirements of the new Subchapter H apply to batch process operations which qualify for one or more exemptions from the requirements of Division 6.

#### *Subchapter B, General Volatile Organic Compound Sources*

### *Division 7, Flares*

The proposed new §115.170, concerning Applicability and Flare Definitions, specifies that any flare in HGA which emits, or has the potential to emit, a VOC is subject to the requirements of the new Subchapter B, new Division 7. In addition, definitions regarding supplementary fuel and pilot gas have been added to define specific gases used in a flare. The proposed new §115.170 also specifies that any flare in HGA which emits, or has the potential to emit, a VOC is subject to the requirements of Subchapter B, Division 7, in addition to the applicable requirements of any other division in Chapter 115. This language is necessary to make it clear that the requirements of the new Division 7 apply in addition to, rather than in place of, the requirements of the new Subchapter H, Division 2.

The proposed new §115.171, concerning Control Requirements, specifies that any flare in HGA must continuously comply with 40 CFR §60.18. This rule is applicable to new as well as existing flares in HGA.

The proposed new §115.173, concerning Monitoring Requirements, specifies that all persons with affected flares shall continuously monitor the mass flow rate of all VOC routed to a flare. In addition, the owner or operator of a flare shall install, calibrate, and operate a continuous flow monitoring device on the main flare header capable of measuring the flow rate over the full range of expected operation, a temperature gauge and pressure gauge in order to comply with 40 CFR §60.18. In addition, the monitoring device must meet the accuracy requirements of 40 CFR 60, Appendix A, Method 2D and the flow monitoring device, temperature gauge, and pressure gauge must be calibrated on an annual basis to meet the specifications of Method 2D.

The proposed new §115.174, concerning Reporting Requirements, specifies that all persons with affected flares shall report, in writing, to the Technical Analysis Division within 30 days following the end of each calendar quarter the average-hourly emission rate for all speciated VOC in the flare header gas. The commission believes this reporting requirement is necessary to ensure the validity of the emissions inventory along with any modeling/compliance issues that arise for each flare. Therefore, the commission solicits comment with respect to this section.

The proposed new §115.175, concerning Sampling Requirements, specifies that the owner or operator of a flare shall take one sample every four hours from a location on the main flare header which is after both the knock-out pot and the location of any addition of supplementary fuel for demonstrating continual compliance with minimum net heating value requirements of 40 CFR §60.18 and to determine the speciated VOC concentrations, in the flare header gas. These samples shall be analyzed according to the procedures in 40 CFR 60, Appendix A, Method 18. In addition, the net heating value of the gas combusted in the flare shall be calculated according to the equation given in 40 CFR §60.18(f)(3) as amended through October 17, 2000 (65 FR 61744). Sampling once every four hours enables a facility the ability to more accurately capture the actual VOC constituents in the gas stream.

The proposed new §115.176, concerning Recordkeeping Requirements, requires the owner or operator to keep records regarding the continuous flow monitoring data, net heating value, VOC concentration in the gas stream, and any sampling that has occurred for each flare at an account. This information is necessary in order to demonstrate compliance with the reporting requirements of this section.

The proposed new §115.179, concerning Counties and Compliance Schedules, requires all persons in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties that have an affected flare(s) under Subchapter B, Division 7, to be in compliance as soon as practicable, but no later than December 31, 2003. However, if a flare at an account has monitoring data that reflects any speciated VOC in the flare header, then the reporting requirements of Subchapter B, Division 7 are applicable and data must be submitted to the Technical Analysis Division no later than April 30, 2003.

### *Subchapter B, General Volatile Organic Compound Sources*

#### *Division 8, Cooling Tower Heat Exchange Systems*

The proposed new §115.180, concerning Applicability and Cooling Tower Heat Exchange System Definitions, specifies that any cooling tower heat exchange system, which includes associated heat exchangers, pumps, and ancillary equipment where water is used as a cooling medium that emits, or has the potential to emit, a VOC is subject to the requirements of Subchapter B, Division 8. This does not include fin-fan coolers or comfort cooling tower heat exchange systems used exclusively in cooling, heating, ventilation, and air conditioning systems. The proposed new §115.180 also specifies that any cooling tower heat exchange system in HGA which emits, or has the potential to emit, a VOC is subject to the requirements of Subchapter B, Division 8, in addition to the applicable requirements of any other division in Chapter 115. This language is necessary to make it clear that the requirements of the new Division 8 apply in addition to, rather than in place of, the requirements of the new Subchapter H, Division 3.

The proposed new §115.182(1), concerning Monitoring Requirements, requires the owner or operator of each cooling tower heat exchange system to install, calibrate, and operate continuous flow monitors on the inlet and outlet of each cooling tower. This monitoring data will give the commission the ability to use the most representative flow monitoring data for a cooling tower that can be used to more accurately reflect the circulation rate of the cooling tower water.

The proposed new §115.182(2) requires the owner or operator of each cooling tower heat exchange system to perform, at a minimum, sampling twice a week to determine the speciated concentration of all VOC in the cooling water using an approved test method. This sampling and testing will provide information regarding the VOC concentrations in the cooling water stream.

The proposed new §115.182(3) requires the owner or operator of each cooling tower heat exchange system to submit for review and approval by the Engineering Services Team, a quality assurance plan for installation, calibration, operation, and maintenance of these programs and provide sampling information regarding the VOC concentrations in the cooling water stream.

The proposed new §115.183(1), concerning Reporting Requirements, requires the owner or operator of each cooling tower heat exchange system to report, in writing, to the Technical Analysis Division within 30 days following the end of each calendar quarter the average-hourly speciated VOC emission rate. The commission believes this reporting requirement is necessary to ensure the validity of the emissions inventory along with any modeling/compliance issues that arise for each cooling tower heat exchange system. Therefore, the commission solicits comment with respect to this section.

The proposed new §115.183(2) requires the owner or operator of each cooling tower heat exchange system that uses chlorine in the treatment of biological agents in the cooling water to report the total amount of chlorine introduced into each cooling tower heat exchange system on an hourly basis.

The proposed new §115.184(1), concerning Testing Requirements, requires the owner or operator of each cooling tower heat exchange system to determine the VOC concentration in cooling water where any of the VOCs in any portion of a process stream contacting a heat exchanger have normal boiling points equal to or less than 140 degrees Fahrenheit. The samples obtained shall be collected by an air-stripping method and analyzed according to the procedures in Test Method 18, 40 CFR 60, Appendix A, and/or Method TO-14A, published in "U.S. EPA Compendium for Determination of Toxic Organic Compounds in Ambient Air," EPA Document Number 625/R96/010B. The air-stripping method is in reference to the El Paso Air Stripping Method.

The proposed new §115.184(2) gives the owner or operator of each cooling tower heat exchange system the ability to determine VOC concentration in the cooling water using a direct water analysis method where any VOC in the associated process has a normal boiling point greater than 140 degrees Fahrenheit. Direct water analysis refers to a procedure where an entire water sample is analyzed.

The proposed new §115.184(3) gives the owner or operator of each cooling tower heat exchange system the ability to request from the commission modifications to the tests methods in §115.184(1) and (2).

The proposed new §115.186(1), concerning Recordkeeping Requirements, requires the owner or operator to establish and maintain a process diagram of the cooling tower heat exchange system, including the points at which the system will be monitored and sampled such that the cooling water is not exposed to the atmosphere prior to sampling. Recordkeeping requirements serve as a tool in demonstrating compliance with the specific requirements of Subchapter H, Division 8.

The proposed new §115.186(2) requires the owner or operator to maintain records that document the continuous flow rate for each cooling tower heat exchange system.

The proposed new §115.186(3) requires the owner or operator to maintain records on a weekly basis that document the speciated concentration of all VOC in the process fluid for each cooling tower heat exchange system.

The proposed new §115.186(4) requires the owner or operator to maintain records of all tests in accordance with the provisions of §115.184, as well as records of in-house testing.

The proposed new §115.186(5) requires the owner or operator for cooling tower heat exchange systems that introduce chlorine into the circulated water to record on a daily basis the amount of chlorine introduced to the cooling tower heat exchange system on an hourly basis.

The proposed new §115.186(6) requires the owner or operator to maintain all records for five years and make available for review upon request by authorized representatives of the executive director, EPA, or any local air pollution control agency with jurisdiction.

The proposed new §115.189, concerning Counties and Compliance Schedules, requires all persons in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller

Counties that have a cooling tower heat exchange system under Subchapter B, Division 8, to be in compliance as soon as practicable, but no later than December 31, 2003. However, if a cooling tower heat exchange system at an account has data that reflects chlorine usage amounts and/or monitoring data for any speciated VOC, then the reporting requirements of Subchapter B, Division 8 are applicable and data must be submitted to the Technical Analysis Division no later than April 30, 2003.

*Subchapter C, Volatile Organic Compound Transfer Operations*  
*Division 1, Loading and Unloading of Volatile Organic Compounds*

The proposed amendment to §115.211, concerning Emission Specifications, revises §115.211(2) by deleting language which is obsolete due to the passing of an April 30, 2000 compliance date.

The proposed amendments to §115.215, concerning Approved Test Methods, revise §115.215(6) by adding the date of the gasoline terminal test procedures of 40 CFR §60.503 (b) - (d) and revise §115.215(7) by updating the reference to the marine vessel vapor-tightness test of 40 CFR §61.304(f).

The proposed amendments to §115.219, concerning Counties and Compliance Schedules, delete the current §115.219(d) - (h) because these subsections are obsolete due to the passing of an April 30, 2000 compliance date. The proposed amendments to §115.219 also revise §115.219(b) and (c) by deleting language which is obsolete due to the passing of an April 30, 2000 compliance date, and adding language which specifies that owners and operators of gasoline terminals and gasoline bulk plants in the 95 attainment counties of east and central Texas must continue to comply with this division as required by §115.930, concerning Compliance Dates. Finally, the proposed amendments to §115.219 reletter the current §115.219(i) as §115.219(d).

*Subchapter C, Volatile Organic Compound Transfer Operations*  
*Division 2, Filling of Gasoline Storage Vessels (Stage I) for Motor Vehicle Fuel Dispensing Facilities*

The proposed amendments to §115.229, concerning Counties and Compliance Schedules, revise §115.229(a) and (b) by deleting language which is obsolete due to the passing of a January 31, 1994 compliance date and replacing it with language specifying that owners and operators of motor vehicle fuel dispensing facilities in the 16 ozone nonattainment counties and 95 attainment counties of east and central Texas must continue to comply with this division as required by §115.930. The proposed amendments to §115.229 also delete the current §115.229(c) and (d) because these subsections are obsolete due to the passing of November 15, 1994 and April 30, 2000 compliance dates.

*Subchapter C, Volatile Organic Compound Transfer Operations*  
*Division 3, Control of Volatile Organic Compound Leaks From Transport Vessels*

The proposed amendments to §115.239, concerning Counties and Compliance Schedules, replace references to the sections in this division with references to the division itself. In addition, the proposed amendments to §115.239 revise §115.239(b) by deleting language which is obsolete due to the passing of an April 30, 2000 compliance date and replacing it with language specifying that the owner or operator of each gasoline tank-truck tank in the 95 attainment counties of east and central Texas must continue to comply with this division as required by §115.930.

*Subchapter D, Petroleum Refining, Natural Gas Processing, and Petrochemical Processes*

*Division 1, Process Unit Turnaround and Vacuum-Producing Systems in Petroleum Refineries*

The proposed amendments to §115.312, concerning Control Requirements, add a new §115.312(a)(3) which specifies that at petroleum refineries in HGA, vent gas streams from steam ejectors, vacuum-producing systems, and hotwells with contact condensers which include a highly-reactive VOC are subject to the requirements of the new Subchapter H in addition to the applicable requirements of Division 1 of Subchapter D. The proposed amendments to §115.312 further specify that at petroleum refineries in HGA, any process unit shutdown or turnaround of a unit in which a highly-reactive VOC is a raw material, intermediate, final product, or in a waste stream, is likewise subject to the requirements of the new Subchapter H in addition to the applicable requirements of Division 1. The new paragraph is necessary to make it clear that the requirements of the new Subchapter H apply in addition to, rather than in place of, the requirements of Division 1.

*Subchapter D, Petroleum Refining, Natural Gas Processing, and Petrochemical Processes*

*Division 2, Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties*

The proposed amendments to §115.326, concerning Record-keeping Requirements, revise §115.326(2)(G)(v) to require the owner or operator to record the date on which a leaking component is placed on the shutdown list. This is necessary in order to enhance enforceability of the requirement that leaking components on the shutdown list be repaired at the next shutdown. The proposed amendments to §115.326 also revise the record retention time specified in §115.326(4) from two years to five years for consistency. The sources subject to Chapter 115 are also subject to FCAA Title V permit requirements, which specify a five-year period for retention of compliance records.

*Subchapter D, Petroleum Refining, Natural Gas Processing, and Petrochemical Processes*

*Division 3, Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas*

The proposed amendments to §115.352 relocate to a new §115.352(2)(A) the current language which specifies that if the repair of a component would require a unit shutdown which would create more emissions than the repair would eliminate, the repair may be delayed until the next shutdown. The new §115.352(2)(A) adds a requirement for the owner or operator to submit documentation that the total cumulative emissions from leaking components in the unit are less than 50% of the emissions resulting from shutdown of the unit. This new requirement is necessary because the emissions resulting from shutdown of the unit are most appropriately compared to the cumulative emissions from leaking components in the unit, rather than the emissions from a single leaking component, because all unrepaired leaking components will continue to emit until the next unit shutdown. The 50% threshold was selected to provide an incentive for owners and operators to make sure they fix all components as soon as possible, thereby minimizing emissions.

In addition, the proposed amendments to §115.352 add a new §115.352(2)(B) which requires that each component for which

repair has been delayed must be repaired at the next unit shutdown. The proposed amendments to §115.352 also add a new §115.352(2)(C) which specifies that delay of repair beyond a unit shutdown is allowed if the component is isolated from the process and does not remain in VOC service, since the component would no longer have the potential to leak.

The proposed amendments to §115.352 also add a new §115.352(2)(D) which specifies that valves which can be repaired without purging and/or cleaning the line may not be placed on the shutdown list. An example of such a valve is a leaking valve in pipeline service and located on the top of the line in a tank farm because the valve can have its packing replaced without a leak occurring provided that the line is depressurized.

The proposed amendments to §115.352 also add a new §115.352(2)(E) which specifies that all components that have been opened or repaired during a shutdown shall be monitored for leaks (with a hydrocarbon gas analyzer) within seven days after startup is completed following the shutdown. This is necessary to ensure that leaking components have been properly repaired.

The proposed amendments to §115.352 add a new §115.352(2)(F) which specifies that all components on the shutdown list must continue to be monitored as required by §115.354. This is necessary in order to be able to quantify emissions from these leaking components and identify components for which the leak has worsened, which could result in the executive director making a decision to require an early shutdown of a unit, or other appropriate action, based on the number and severity of leaks awaiting a shutdown.

In addition, the proposed amendments to §115.352 revise §115.352(4) to specify that caps or plugs on open-ended lines must be tightly-fitting. This is necessary because in some cases the caps or plugs are only finger-tight, thereby resulting in emissions. The proposed amendments to §115.352 also revise §115.352(8) to allow metal-to-metal seals. This is a type of connector which commission staff has determined is as effective as a flanged connection.

Finally, the proposed amendments to §115.352 add a new §115.352(10) which specifies that any petroleum refinery; synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing process; or natural gas/gasoline processing operation in HGA in which a highly-reactive VOC is a raw material, intermediate, final product, or in a waste stream, is subject to the requirements of the new Subchapter H in addition to the applicable requirements of Division 3 of Subchapter D. The new paragraph is necessary to make it clear that the requirements of the new Subchapter H apply in addition to, rather than in place of, the requirements of Division 3.

The proposed amendments to §115.354, concerning Inspection Requirements, add new §115.354(9) to require that all component monitoring take place when the component is in contact with process material and the unit is in service. This is necessary because some companies have been monitoring components in units that are shut down, thereby inflating the count of components that are not leaking and lowering, on paper, the percentage of components that are leaking.

The proposed amendments to §115.354 also add new §115.354(10) to require the use of dataloggers and/or electronic data collection devices during monitoring, except when paper logs are necessary or more feasible (e.g., small rounds, re-monitoring following component repair, or when dataloggers are

broken or not available). In addition, new §115.354(10) requires daily transfer of electronic data from electronic datalogging devices to the electronic database required by §115.356(1), concerning Monitoring and Recordkeeping Requirements.

The new §115.354(10) further requires that when an electronic data collection device is used, the collected monitoring data must include a time and date stamp, an operator identification, and an instrument identification. If the collected monitoring data indicates that the technician recorded data at a faster rate than monitoring in accordance with Test Method 21 could have been conducted, then all of that data is considered invalid. This is necessary due to a situation in which a monitoring technician recorded data faster than was physically possible due to the hydrocarbon gas analyzer response time and the time required for the technician to move to the next component.

The new §115.354(10) also prohibits changes to the electronic database once the electronic data from electronic datalogging devices have been transferred to the database, and specifies that if there are discrepancies between the data in the electronic database required by §115.356(1) and the data in the datalogger and/or field notes, then all of that data is considered invalid. This is necessary to prevent attempts at unauthorized changes to data in the electronic database.

In addition, the proposed amendments to §115.354 add a new §115.354(11) which specifies that for the hydrocarbon gas analyzer being used to monitor components for leaks, if the relative response factor multiplier of VOCs expected to be emitted from a component is greater than 1.0, then that response factor should be used to correct measured concentrations to determine if a leak is occurring. This is necessary to be able to more accurately determine the VOC concentration, which in turn will allow for a more accurate emissions inventory for use in developing control strategies toward reaching attainment with the ozone standard.

The proposed amendments to §115.354 add a new §115.354(12) which specifies that the monitored VOC concentration must be recorded for each component, rather than using notations such as "not leaking" or "below leak definition" for readings that are below the leak definition for the component, or "pegged," "off scale," or "leaking" for readings that are above the leak definition for the component.

For "pegged" readings on the hydrocarbon gas analyzer, one approach is to set the hydrocarbon gas analyzer to 10x scale or, if necessary, 100x scale. For example, a hydrocarbon gas analyzer reading of 8,000 ppmv on 10x scale means that the actual VOC concentration which must be recorded is 80,000 ppmv. If the hydrocarbon gas analyzer is still pegged on 100x scale or is not equipped with a 100x scale, a default pegged value of 500,000 ppmv is recorded.

Alternatively, if the hydrocarbon gas analyzer is not equipped with a 10x scale, a dilution probe which pulls in ambient air at a known ratio (e.g., ten-to-one) is used. For example, a hydrocarbon gas analyzer reading of 8,000 ppmv with a dilution probe using a ten-to-one dilution ratio means that the actual VOC concentration which must be recorded is 80,000 ppmv. If the hydrocarbon gas analyzer is still pegged using a dilution probe, a default pegged value of 500,000 ppmv is recorded.

This is necessary to be able to more accurately determine the VOC concentration for "pegged" components, which in turn will allow for a more accurate emissions inventory for use in developing control strategies toward reaching attainment with the ozone standard.

Similarly, the requirement to record the VOC concentration for components which are below the leak threshold will allow for a more accurate emissions inventory for use in developing control strategies toward reaching attainment with the ozone standard.

Finally, the proposed amendments to §115.354 add a new §115.354(13) which specifies that exemptions for valves with a nominal size of two inches or less expired on July 31, 1992 (final compliance date). The new paragraph is necessary due to the continued misconception that such an exemption is available in Chapter 115 for ozone nonattainment areas, despite the fact that the rule change which eliminated the exemption was adopted over 11 years ago. (See the July 2, 1991 issue of the *Texas Register* (16 TexReg 3722 - 3724)).

The proposed amendments to §115.356 revise §115.356(1)(E) to require records of the results of the weekly audio, visual, and olfactory inspections of flanges required by §115.354(3). This is necessary because currently there is no way to determine whether the required weekly flange inspections are being conducted as required.

In addition, the proposed amendments to §115.356 revise §115.356(1)(F) to specify that the record of the calibration of the hydrocarbon gas analyzer includes the calibration gas values and the instrument reading. The proposed revisions to §115.356 also revise §115.356(1)(G)(v) to require the owner or operator to record the date on which a leaking component is placed on the shutdown list. In addition, the proposed amendments to §115.356 revise §115.356(2) to specify that records of the audio, visual, and olfactory inspections of connectors are not required unless a leak is detected. The current §115.356(2) only include reference to flanges, which are a specific type of connector. The proposed amendments to §115.356(2) are necessary because the recordkeeping requirements of §115.356 are used to specify some of the records required to demonstrate compliance with the proposed new Subchapter H, Division 4, concerning Fugitive Emissions, which requires monitoring (with a hydrocarbon gas analyzer) and inspection of connectors.

The proposed amendments to §115.356 also add a new §115.356(4) which requires development and maintenance of a master components list. This is necessary because without the master components list, it is difficult to determine what needs to be monitored.

The proposed amendments to §115.356 also renumber the current §115.356(4) as §115.356(5) to accommodate the new §115.356(4), and revise the record retention time specified in the renumbered §115.356(5) from two years to five years for consistency. The sources subject to Chapter 115 are also subject to FCAA Title V permit requirements, which specify a five-year period for retention of compliance records.

The proposed amendments to §115.357, concerning Exemptions, revise §115.357(2) to clarify that the current reference to "storage tank valves" means conservation vents or other devices on atmospheric storage tanks that are actuated either by a vacuum or a pressure of no more than 2.5 pounds per square inch gauge (psig).

In addition, the proposed amendments to §115.357 revise §115.357(5) to clarify that reciprocating compressors and positive displacement pumps used in natural gas/gasoline processing operations are exempt from the requirements of Division 3.

The proposed amendments to §115.357 also add a new §115.357(10) which specifies that the requirements of the new Subchapter H apply to components which qualify for one or more of the exemptions in §115.357(1) - (9). The new paragraph is necessary to make it clear that the requirements of the new Subchapter H apply in HGA to each component in processes in which a highly-reactive VOC is a raw material, intermediate, final product, or in a waste stream, regardless of whether the component can qualify for an exemption from the requirements of Division 3 of Subchapter D.

The proposed amendments to §115.359, concerning Counties and Compliance Schedules, add a new §115.359(2) which specifies an April 30, 2003 compliance date for maintaining records of the results of the weekly audio, visual, and olfactory inspections of flanges required by §115.354(3).

The proposed amendments to §115.359 also add a new §115.359(3) which specifies an April 30, 2003 compliance date for development of the initial master components list required by the new §115.356(4).

In addition, the proposed amendments to §115.359 add a new §115.359(4) which specifies a December 31, 2003 compliance date for adjusting the measured VOC concentration using the appropriate relative response factor required by the new §115.354(11).

#### *Subchapter E, Solvent-Using Processes*

##### *Division 2, Surface Coating Processes*

The proposed amendment to §115.420, concerning Surface Coating Definitions, revises the definition of "vehicle refinishing (body shops)" in §115.420(b)(12)(B)(viii) to clarify the intent of the exclusion of "construction equipment" from this definition. Specifically, the proposed revisions replace "vehicle" with "motor vehicle" because the definition of "vehicle refinishing (body shops)" is intended to apply to self-propelled vehicles that are required to be registered under Texas Transportation Code, Chapter 502, consistent with the definition of "motor vehicle" in 30 TAC §114.620(3), concerning Definitions. In addition, the proposed revisions replace "construction equipment" with a reference to non-road equipment and non-road vehicles, as those terms are defined in §114.6(17), concerning Low Emission Fuel Definitions, and §114.3(10), concerning Low Emission Vehicle Fleet Definitions. The proposed revisions are necessary to eliminate any confusion over whether the coating of construction equipment is classified as vehicle refinishing or as miscellaneous metal parts and products coating.

The proposed amendment to §115.421, concerning Emission Specifications, deletes §115.421(a)(9)(A)(v) because this requirement is no longer applicable as of December 31, 2001.

The proposed amendments to §115.427, concerning Exemptions, revise §115.427(a)(1)(A) and (3) and (b)(2)(A) by deleting language which is obsolete due to the passing of a December 31, 2001 compliance date.

The proposed amendments to §115.429, concerning Counties and Compliance Schedules, delete the current §115.429(a) and (b) because these subsections are obsolete due to the passing of a December 31, 1999 compliance date. The proposed amendments to §115.429 also revise the current §115.429(c) by deleting language which is obsolete due to the passing of a December 31, 2001 compliance date and replacing it with language specifying that the owner or operator of each surface coating operation in the 16 ozone nonattainment counties and Gregg, Nueces, and

Victoria Counties must continue to comply with this division as required by §115.930.

#### *Subchapter H, Highly-Reactive Volatile Organic Compounds*

##### *Division 1, Vent Gas Control*

The proposed new §115.720, concerning Applicability, specifies that any vent gas stream in HGA in which includes a highly-reactive VOC is subject to the requirements of Division 1 of Subchapter H in addition to the applicable requirements of Divisions 2 and 6 of Subchapter B and Division 1 of Subchapter D. The new section is necessary to make it clear that the requirements of the new Division 1 of Subchapter H apply in addition to, rather than in place of, the requirements of Divisions 2 and 6 of Subchapter B and Division 1 of Subchapter D.

The proposed new §115.722, concerning Control Requirements, establishes the control requirements for vent gas streams in HGA in which include a highly-reactive VOC. The proposed new §115.722(a) specifies that for low-density polyethylene plants, the exemption of §115.127(a)(1) is not applicable. Instead, the proposed new §115.722(a) establishes an allowable VOC emission rate from low-pressure low-density polyethylene plants (including the residual VOC, but excluding fugitive emissions) of 90 pounds of ethylene per 1.0 million pounds of product from all the vent gas streams associated with the formation, handling, and storage of solidified product, based on a 30-day rolling average. For high-pressure low-density polyethylene plants, the corresponding VOC emission limit is 200 pounds of ethylene per 1.0 million pounds of product from all the vent gas streams associated with the formation, handling, and storage of solidified product, based on a 30-day rolling average. The current exemption of §115.127(a)(1), which is actually an emission specification, was adopted on March 30, 1979 and does not represent current control technology. The proposed new §115.722(a) is based upon best available control technology (BACT) guidelines for new source review (NSR) permitting.

The proposed new §115.722(b) establishes an alternative requirement for low-density polyethylene plants. Specifically, the option is to control all vent gas streams from low-density polyethylene plants with a control efficiency of at least 98% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen (O<sub>2</sub>) for combustion devices). These are standard control requirements for properly designed and operated control devices.

The proposed new §115.722(c) specifies that for vent gas streams other than those from low-density polyethylene plants, emissions must be controlled properly with a control efficiency of at least 98% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% O<sub>2</sub> for combustion devices). Vent gas streams subject to the proposed new §115.722(c) include vent gas streams subject to: §§115.121(a)(1) and (2); §115.162, concerning Control Requirements; and §115.312(a)(1)(B) and (2).

The proposed new §115.722(d) requires closed-vent systems, control devices, and recovery devices to be operating properly whenever VOC emissions are directed to them. The proposed new §115.722(e) requires flares used to comply with the appropriate VOC control requirements of §115.722(a), (b), or (c) to meet the requirements of the proposed new Subchapter H, Division 2, concerning Flares, and 40 CFR §60.18(b) or §63.11(b). These are all standard control requirements for properly designed and operated control devices.

The proposed new §115.722(e) specifies that an owner or operator may not use emission reduction credits or discrete emission reduction credits in order to demonstrate compliance with Subchapter H, Division 1.

The commission solicits comment on the concept of establishing an emission rate cap for all highly-reactive VOC emitted from all vent gas streams at an account which are continuously monitored or on the concept of establishing an emission rate cap for all highly-reactive VOC emitted from all flares, vents, and cooling tower heat exchange systems at an account.

The proposed new §115.723, concerning Alternate Control Requirements, establishes the availability of an alternate reasonably available control technology (ARACT) determination for situations in which a vent gas stream, as of December 31, 2002, is controlled by a control device with a control efficiency of at least 95%, but which is not required to be controlled with a control efficiency of at least 98% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% O<sub>2</sub> for combustion devices). An ARACT is approvable if the executive director determined that it is economically unreasonable to replace the control device with a control device meeting the 98% control efficiency (or 20 ppmv) requirement.

If the control device undergoes a replacement, a modification as defined in 40 CFR §60.14, or a reconstruction as defined in 40 CFR §60.15, then the ARACT is no longer valid and the replacement, modified, or reconstructed control device must meet the 98% control efficiency (or 20 ppmv) requirement.

Any request for an ARACT determination must be submitted no later than March 31, 2003 in order to allow processing of the ARACT request before the final compliance date. In addition, the holder of an ARACT may be required to reapply for an ARACT if it is more than ten years since the date of installation of the control device and there is good cause to believe that it is now economically reasonable to meet the 98% control efficiency (or 20 ppmv) requirement. Ten years was selected because this allows ample time for the amortization of the cost of the original control device.

The proposed new §115.725, concerning Testing Requirements, establishes the testing requirements for vent gas streams which include a highly-reactive VOC. The proposed new §115.725(a) requires testing with a portable analyzer, or by applying the appropriate reference method tests, on all vent gas streams for which the owner or operator has claimed exemption. First, vent gas streams claimed exempt must be tested to establish the VOC concentration. The purpose of this testing is to determine whether the vent gas stream qualifies for the exemption being claimed or, for vent gas streams not controlled under §115.162, to determine whether the vent gas stream should nevertheless be controlled.

If the VOC concentration determined from testing of the vent gas stream with a portable analyzer exceeds 50% of the exemption level (or 306 ppmv for vent gas streams not controlled under §115.162 from batch processes subject to §115.161), the owner or operator can choose to direct the vent gas stream to a control device or conduct reference method testing in order to determine the VOC mass emission rate.

If the owner or operator chooses to conduct reference method testing in order to determine the VOC mass emission rate, the vent gas stream must be directed to a control device if the reference method testing determines that the mass emission rate exceeds a combined weight of VOC greater than 14 pounds in

any continuous 24-hour period for vent gas streams claimed exempt under §115.127(a)(2)(A) or (3)(A).

For a vent gas stream claimed exempt under §115.127(a)(4)(C), if the owner or operator chooses to conduct reference method testing, the vent gas stream must be directed to a control device if the reference method testing determines that the flow rate is greater than 0.011 standard cubic meters per minute.

The proposed new §115.725(b) requires stack testing of all control devices used to control vent gas streams subject to §115.722. This testing is necessary to confirm that the control efficiency requirements are being met.

The proposed new §115.725(c) specifies the testing coordination procedures and stack test report requirements, and provides that early testing conducted before December 31, 2002 may be used to demonstrate compliance with the standards specified in this division.

The proposed new §115.726, concerning Monitoring and Recordkeeping Requirements, specifies the records which must be kept to demonstrate compliance. The proposed new §115.726(a) requires that the current monitoring and recordkeeping requirements of §115.126(1)(A) - (C) and §115.166(1) must be met for vapor control systems.

The proposed new §115.726(b) requires that results of all testing must be maintained, and the proposed new §115.726(c) and (d) require the maintenance of records in sufficient detail to demonstrate continuous compliance with any exemptions claimed.

The proposed new §115.726(e) requires that all records be maintained for at least five years and made available for review upon request by authorized representatives of the executive director, EPA, or local air pollution control agencies with jurisdiction. The sources subject to Chapter 115 are also subject to FCAA Title V permit requirements, which specify a five-year period for retention of compliance records.

The proposed new §115.727, concerning Exemptions, establishes the available exemptions. The proposed new §115.727(a) exempts each vent gas stream which contains less than 1.0% highly-reactive VOC by weight of the VOC in the vent gas stream from the requirements of Subchapter H, Division 1, except for testing and recordkeeping requirements necessary to document that a vent gas stream qualifies for this exemption.

The proposed new §115.727(b) exempts each vent gas stream at a low-density polyethylene plant which has a VOC concentration less than 100 ppmv and a mass emission rate no greater than 14 pounds of VOC in any continuous 24-hour period. Similarly, the proposed new §115.727(c) exempts each vent gas stream which has a VOC concentration less than 204, 250, or 306 ppmv, as appropriate, and a mass emission rate no more than 14 pounds of VOC in any continuous 24-hour period. These concentration thresholds are half of the current exemption levels, and the upper limit on mass emissions is 14% of the current mass emission exemption of 100 pounds in any continuous 24-hour period. The reduced exemption levels are necessary to minimize emissions of highly-reactive VOCs which contribute to ozone exceedances.

The proposed new §115.727(d) exempts each vent gas stream which qualifies for exemption under §115.127(a)(6) from the requirements of Subchapter H, Division 1. This exemption is necessary to exclude sources which are addressed by a more specific division in Chapter 115 (for example, Storage of Volatile Organic Compounds; or Surface Coating Processes).

The proposed new §115.729, concerning Counties and Compliance Schedules, specifies the compliance dates and affected counties for sources subject to the new vent gas control requirements. Specifically, all testing must be completed and the results submitted as soon as practicable, but no later than December 31, 2003. The proposed new §115.729 specifies a compliance date of December 31, 2004 for all other requirements. The proposed compliance schedule was developed to be as expeditious as practicable, with consideration and balancing between competing needs for economic reasonableness and expeditious reductions.

#### *Subchapter H, Highly-Reactive Volatile Organic Compounds*

##### *Division 2, Flares*

The proposed new §115.740, concerning Applicability and Flare Definitions, specifies that any flare in HGA which emits, or has the potential to emit, a highly-reactive VOC is subject to the requirements of new Subchapter H, Division 2. In addition, definitions regarding supplementary fuel and pilot gas have been added to define specific gases used in a flare.

The proposed new §115.741, concerning Emission Specifications, specifies that the total highly-reactive VOC emission rate for each flare at an account shall not exceed 0.6 pounds-per-hour. If this emission rate is exceeded and exemption is claimed under 30 TAC §101.222, concerning Demonstrations, the owner or operator must use the records that are required to be retained under §115.746, concerning Recordkeeping Requirements, in the calculation and justification of those excess emissions in order to demonstrate compliance with that section. Section 101.222 was proposed in the April 26, 2002 issue of the *Texas Register* (27 TexReg 3475) and, if adopted, will replace the current 30 TAC §101.11, concerning Demonstrations.

The highly-reactive VOC emission rate of 0.6 pounds per hour represents the amount that each flare can emit into the HGA airshed and still demonstrate compliance with the one-hour ozone attainment standard. In such instances that this rate is exceeded, the owner or operator must use actual monitoring data to show that the exceedance was not preventable based on the most current operating history. Use of actual site specific monitoring data in determining compliance with §101.222, will produce results that more accurately represent hourly activity of the flare. The commission expects that industry will use best management practices in order to ensure compliance with the emission specification within this division. In addition, the commission solicits comment on the concept of establishing an emission rate cap for all highly-reactive VOC emitted from all flares at an account or on the concept of establishing an emission rate cap for all highly-reactive VOC emitted from all flares, vents, and cooling tower heat exchange systems at an account.

The proposed new §115.742(a), concerning Control Requirements, specifies that any owner or operator of a flare in HGA must continuously comply with 40 CFR §60.18. This rule is applicable to new as well as existing flares in HGA.

The proposed new §115.742(b) requires the owner or operator to take corrective action to decrease the highly-reactive VOC emission rate below the limit stated in §115.741. This action is to commence immediately once monitoring data shows an exceedance of the emission limits and corrective action must be completed within 24 hours.

The proposed new §115.743, concerning Alternate Control Requirements, establishes the availability of an ARACT determination for situations regarding the emission specification, control requirements, or exemption criteria provided that the emission reductions are demonstrated to be substantially equivalent. However, an owner or operator may not use emission reduction credits or discrete emission reduction credits in order to demonstrate compliance with the emission specifications section of this division.

The proposed new §115.744(1), concerning Monitoring Requirements, specifies that all persons with an affected flare shall continuously monitor the mass flow rate of all highly-reactive VOC routed to a flare. The owner or operator of a flare shall install, calibrate, and operate a continuous flow monitoring device on the main flare header capable of measuring the flow rate over the full range of expected operation, a temperature gauge, and pressure gauge in order to comply with 40 CFR §60.18. The flow monitoring device, temperature gauge, and pressure gauge must be calibrated on an annual basis to meet the specifications of Method 2D.

The proposed new §115.744(2) specifies that continuous compliance with minimum net heating value requirements of 40 CFR §60.18 and with the highly-reactive VOCs mass rate specified in §115.741, the owner or operator of a flare shall install, calibrate, maintain, and operate an on-line analyzer capable of determining highly-reactive VOC constituents in the flare header gas, at least once every 15 minutes. For determining the highly-reactive VOC concentrations in the flare header gas, samples shall be analyzed according to the procedures in 40 CFR 60, Appendix A, Method 18 as amended through October 17, 2000 (65 FR 61744). Samples shall be analyzed by American Standard of Testing Materials (ASTM) Standard D1946-77 to determine inorganic constituents (including, but not limited to, hydrogen, carbon monoxide, O<sub>2</sub>, nitrogen, and carbon dioxide). Daily calibration of the on-line analyzer shall follow the procedures of section 10.0 "Calibration and Standardization" of 40 CFR 60, Appendix B, Performance Specification 9, as amended through October 17, 2000 (65 FR 61744). Net heating value of the gas combusted in the flare shall be calculated according to the equation given in 40 CFR §60.18(f)(3) as amended through October 17, 2000 (65 FR 61744). Pilot gas shall not be included in the determination of the net heating value.

The proposed new §115.744(3) specifies that modifications to these monitoring methods may be used if approved by the executive director.

The proposed new §115.745, concerning Reporting Requirements, specifies that all persons with affected flares shall report, in writing, to the Technical Analysis Division within 30 days following the end of each calendar quarter the average-hourly emission rate for all highly-reactive VOC in the flare header gas. The commission believes this reporting requirement is necessary to ensure the validity of the emissions inventory along with any modeling/compliance issues that arise for each flare. Therefore, the commission solicits comment with respect to this section.

The proposed new §115.746(1), concerning Recordkeeping Requirements, specifies that the owner or operator shall maintain records of the total emission rate on a pounds-per-hour basis for each flare at an account that has highly-reactive VOC in the gas stream.

The proposed new §115.746(2) specifies that the owner or operator shall maintain records on a weekly basis that detail any delay in corrective action.

The proposed new §115.746(3) specifies that the owner or operator shall maintain records of the net heating value of the gas stream routed to the flare and the exit velocity at the flare tip.

The proposed new §115.746(4) requires the owner or operator to keep all records requested in §115.746 (1) - (3) for five years and make available for review upon request by authorized representatives of the executive director, EPA, or any local air pollution control agency with jurisdiction.

The proposed new §115.747, concerning Exemptions, allows flares in which the total of the gas streams, including supplemental fuel, that are routed to a flare in which highly-reactive VOC comprise less than 1.0% by weight of the total VOC in the gas stream and the emission rate is below the limits stated in §115.741, shall be exempt from the control requirements of §115.742(b) and (c).

The proposed new §115.749, concerning Counties and Compliance Schedules, allows the owner or operator of a flare in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties to demonstrate compliance with Subchapter H, Division 2, as soon as practicable, but no later than December 31, 2003, with the exception for emission specification requirements in §115.741 and control requirements in §115.742(b) and (c), for which the owner or operator must demonstrate compliance as soon as practicable, but no later than December 31, 2005. However, if a flare at an account has monitoring data that reflects any highly-reactive VOC, then the reporting requirements of Subchapter H, Division 2 are applicable and data must be submitted to the Technical Analysis Division no later than April 30, 2003.

#### *Subchapter H, Highly-Reacting Volatile Organic Compounds*

##### *Division 3, Cooling Tower Heat Exchange Systems*

The proposed new §115.760, concerning Applicability and Cooling Tower Heat Exchange System Definitions, specifies that any cooling tower heat exchange system in HGA that emits, or has the potential to emit, a highly-reactive VOC is subject to the new requirements of Subchapter B, Division 8. This does not include fin-fan coolers or comfort cooling tower heat exchange systems used exclusively in cooling, heating, ventilation, and air conditioning systems.

The proposed new §115.761, concerning Emission Specifications, specifies that the total highly-reactive VOC emission rate for each cooling tower heat exchange system at an account shall not exceed 8.0 pounds-per-hour. The highly-reactive VOC emission rate of 8.0 pounds-per-hour represents the amount that each cooling tower heat exchange system can emit into the HGA airshed and still demonstrate compliance with the one-hour ozone attainment standard. In such instances that this rate is exceeded, the owner or operator must use actual monitoring data to show that the exceedance was unpreventable based on the most current operating history. Use of actual site specific monitoring data in determining compliance with §101.222, will produce results that more accurately represent hourly activity of the cooling tower heat exchange system. The commission expects that industry will use best management practices in order to ensure compliance with the emission specification within this section. In addition, the commission solicits comment on the concept of establishing an emission

rate cap for all highly-reactive VOC emitted from all cooling tower heat exchange systems at an account or on the concept of establishing an emission rate cap for all highly-reactive VOC emitted from all flares, vents, and cooling tower heat exchange systems at an account.

The proposed new §115.762, concerning Control Requirements, specifies that corrective action to eliminate excess emissions above the limit stated in §115.761 shall be completed within 24 hours from when the sample is collected. To demonstrate that excess emissions are eliminated, testing in accordance with appropriate methods in §115.766 shall be performed to demonstrate compliance with the applicable emission specification in §115.761. This corrective action is necessary in order to demonstrate that leaks from cooling tower heat exchanger systems are corrected within a short time frame from when data, through continuous samples or periodic sampling, alerts the owner or operator that a leak is occurring.

The proposed new §115.763, concerning Alternative Control Requirements, establishes the availability of an ARACT determination for situations regarding the emission specification, control requirements, or exemption criteria provided that the emission reductions are demonstrated to be substantially equivalent. However, an owner or operator may not use emission reduction credits or discrete emission reduction credits in order to demonstrate compliance with the emission specifications of Subchapter H, Division 3.

The proposed new §115.764(1), concerning Monitoring Requirements, requires the owner or operator of a cooling water heat exchange system equal to or greater than 8,000 gallons per minute (gpm) of cooling water circulated shall install, calibrate, and operate continuous flow monitors on the inlet and outlet of each cooling tower and continuous VOC monitors on the inlet and outlet of each cooling tower that are capable of detecting all highly-reactive VOCs. In addition, during out-of-order periods of the VOC monitor(s), a grab sample shall be collected every eight hours to verify the highly-reactive VOC emission rate.

The proposed new §115.764(2) requires the owner or operator of a cooling water heat exchange system less than 8,000 gpm of cooling water circulated to install, calibrate, and operate continuous flow monitors on the inlet and outlet of each cooling tower and perform, at a minimum, sampling twice a week to determine the concentration of all highly-reactive VOCs, in the cooling water using one of the test methods in §115.766.

The proposed new §115.764(3) requires the owner or operator of a cooling water heat exchange system to submit for review and approval by the Engineering Services Team, a quality assurance plan for installation, calibration, operation, and maintenance for the monitoring programs. This plan shall be submitted prior to initiating a monitoring program to comply with the requirements of §115.764(1) or (2). Additionally, the plan must define each compound which could potentially leak through the heat exchanger, and therefore directly impact the emissions of cooling water system.

The proposed new §115.765(1), concerning Reporting Requirements, requires the owner or operator of each cooling tower heat exchange system to report, in writing, to the Technical Analysis Division within 30 days following the end of each calendar quarter the average-hourly emission rate for all highly-reactive VOC. The commission believes this reporting requirement is necessary to ensure the validity of the emissions inventory along with any modeling/compliance issues that arise for each cooling

tower heat exchange system. Therefore, the commission solicits comment with respect to this section.

The proposed new §115.765(2) requires the owner or operator of each cooling tower heat exchange system that uses chlorine in the treatment of biological agents in the cooling water, to report the total amount of chlorine introduced into each cooling tower heat exchange system on an hourly basis.

The proposed new §115.766(1), concerning Testing Requirements, requires the owner or operator of each cooling tower heat exchange system to install a continuous monitoring device which, at a minimum, will determine a surrogate VOC level in the stripped gas. The continuous monitor will be calibrated with a known specie which best represents potential in leakage into the cooling tower system.

The proposed new §115.766(2) requires the owner or operator of each cooling tower heat exchange system to determine the concentration of all highly-reactive VOC in cooling water where any of the VOCs in any portion of a process stream contacting a heat exchanger have normal boiling points equal to or less than 140 degrees Fahrenheit. The samples shall be collected and analyzed according to the procedures in Test Method 18, 40 CFR 60, Appendix A, and/or Method TO-14A, published in "U.S. EPA Compendium for Determination of Toxic Organic Compounds in Ambient Air," EPA Document Number 625/R96/010B.

The proposed new §115.766(3) gives the owner or operator of each cooling tower heat exchange system the ability to determine the highly-reactive VOC concentration in cooling water using a direct water analysis method, where all of the highly-reactive VOCs in the associated process have normal boiling points greater than 140 degrees Fahrenheit.

The proposed new §115.766(4) gives the owner or operator of each cooling tower heat exchange system the ability to request from the commission modifications to the tests methods in §115.766(2) and (3).

The proposed new §115.767(1), concerning Recordkeeping Requirements, requires the owner or operator to keep establish and maintain a process diagram of the cooling tower heat exchange system, including the points at which the system will be monitored and sampled such that the cooling water is not exposed to the atmosphere prior to sampling.

The proposed new §115.767(2) requires the owner or operator to maintain records that document the continuous flow rate for each cooling tower heat exchange system and the highly-reactive VOC monitoring data for each cooling tower heat exchange system.

The proposed new §115.767(3) requires the owner or operator to maintain hourly records that document the pounds-per-hour emitted for all highly-reactive VOC in the process fluid for each cooling tower heat exchange system with a cooling water circulation rate equal to or greater than 8,000 gpm in order to demonstrate continuous compliance with the applicable criteria of §115.761.

The proposed new §115.767(4) requires the owner or operator to maintain records on a weekly basis that document the pounds-per-hour emitted for all highly-reactive VOC in the process fluid for each cooling tower heat exchange system with a cooling water circulation rate less than 8,000 gpm to demonstrate continuous compliance with the applicable criteria of §115.761.

The proposed new §115.767(5) requires the owner or operator to maintain records of all tests in accordance with the provisions of §115.766, as well as records of in-house testing.

The proposed new §115.767(6) requires the owner or operator to maintain records on a weekly basis that detail all corrective actions, or any delay in corrective action, by documenting the dates, reasons, and durations of such occurrences and the estimated quantity of all highly-reactive VOC emissions during such activities.

The proposed new §115.767(7) requires the owner or operator to maintain records of heat exchanger pressure differential to document continuous compliance with the exemption criteria of §115.768(a).

The proposed new §115.767(8) requires the owner or operator to maintain records of highly-reactive VOC content in the process stream by weight to demonstrate continuous compliance with the exemption criteria of §115.768(1).

The proposed new §115.767(9) requires the owner or operator to maintain all records for five years and make available for review upon request by authorized representatives of the executive director, EPA, or any local air pollution control agency with jurisdiction.

The proposed new §115.768(1), concerning Exemptions, allows the owner or operator of any cooling tower heat exchange system that is operated with the minimum pressure on the cooling water side at least five psig greater than the maximum pressure on the process side to be exempt from the control requirements of §115.762.

The proposed new §115.768(2) allows the owner or operator of any cooling tower heat exchange system in which highly-reactive VOC comprise less than 1.0% by weight of the total VOC in each heat exchanger and the emission limits are below the limits stated in §115.761 to be exempt from the control requirements of §115.762.

The proposed new §115.769, concerning Counties and Compliance Schedules, requires the owner or operator of a cooling tower heat exchange system in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties to demonstrate compliance with Subchapter H, Division 4, as soon as practicable, but no later than December 31, 2003 with the exception for the emission specification requirements in §115.761 and control requirements in §115.762, for which the owner or operator shall demonstrate compliance as soon as practicable, but no later than December 31, 2005. However, if a cooling tower heat exchange system at an account has data that reflects chlorine usage amounts and/or monitoring data for any highly-reactive VOC, then the reporting requirements of Subchapter H, Division 4 are applicable and data must be submitted to the Technical Analysis Division no later than April 30, 2003.

#### *Subchapter H, Highly-Reacting Volatile Organic Compounds*

##### *Division 4, Fugitive Emissions*

The proposed new §115.780, concerning Applicability, specifies that any petroleum refinery; synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing process; or natural gas/gasoline processing operation in HGA in which a highly-reactive VOC is a raw material, intermediate, final product, or in a waste stream is subject to the requirements of Division 4 of Subchapter H in addition to the applicable requirements of Division 3 of Subchapter D. The new section is necessary to make it

clear that the requirements of the new Division 4 of Subchapter H apply in addition to, rather than in place of, the requirements of Division 3 of Subchapter D.

The proposed new §115.781, concerning General Monitoring and Inspection Requirements, includes a requirement in the new §115.781(a) for the owner or operator to identify the components of each unit which is subject to the new Division 4 of Subchapter H. This is necessary to ensure that components which are subject to this division are readily identifiable for monitoring, which in turn will improve the compliance rate and reduce emissions of highly-reactive VOCs.

The proposed new §115.781(b) specifies that each component in a unit subject to this division must be monitored in accordance with Division 3 of Subchapter D, with additional requirements intended to address components which are not monitored adequately, if at all, under Division 3 of Subchapter D. Specifically, the exemptions in Division 3 of Subchapter D do not apply, and leak-skip under §115.354(7) and (8) is not allowed because leak-skip can allow leaks to occur for up to one year before the leak is detected. In addition, quarterly monitoring is required for a variety of components that have been found to leak, yet in most cases are not currently required to be monitored at all. These components include: blind flanges, caps, or plugs at the end of a pipe or line containing VOC; connectors; heat exchanger heads; sight glasses; meters; gauges; sampling connections; bolted manways; hatches; agitators; sump covers; stormwater drains; junction box vents; covers and seals on VOC water separators; and process drains.

The proposed new §115.781(b) also specifies that all components which were opened or repaired during a shutdown must be monitored and inspected for leaks within seven days after startup. This is necessary to determine whether repairs were successfully completed.

In addition, daily inspections are required for all process drains equipped with water seals to ensure that the water seals are properly designed and maintained such that they are effective in preventing emissions. For process drains without water seals, the proposed new §115.781(b) requires weekly inspections to ensure that all gaskets, caps, and/or plugs are in place and that there are no gaps, cracks, or other holes in the gaskets, caps, and/or plugs. In addition, all caps and plugs must be inspected weekly to ensure that they are tightly-fitting. This is necessary because in some cases the caps or plugs are only finger-tight, thereby resulting in emissions.

These requirements for process drains are necessary for the following reasons. Commission staff has found that many of these drains are configured with u-shaped P-traps that use a water seal as control technology. Many process drains receive high-temperature material or steam condensate, and any water in the drain seals is quickly evaporated. These drains then have a relatively high flow rate in air volume coming out of them, resulting in uncontrolled VOC emissions. If found leaking during an annual monitoring check, commission staff has found that an owner or operator can simply pour water in the drain and ignore it for another year. In April 2000, commission staff monitored the process drains in an ethylene unit and found readings as high as 2,000 ppmv on process drains that were all equipped with water seal technology but no water seal. In many cases, emissions are recurring within hours of filling the drains. Consequently, some of these drains leak most of the year, and therefore the commission is proposing this more frequent inspection schedule.

The proposed new §115.781(b) also specifies that all components which are required to be monitored quarterly must be monitored twice during the third quarter (July - September) of each year: once between July 1 and August 15, and again between August 16 and September 30. There must be at least 30 days between the dates that a component is monitored during the third quarter of each year. The commission is proposing this additional round of monitoring based on California's South Coast Air Quality Management District (SCAQMD) audit data from 1994 - 1999 at eight refineries. The data indicate that leaks occur more frequently in the third quarter, which may be due to thermal stress during the hottest months of the year, and more frequent monitoring during this quarter will enable identification and repair of leaking components more quickly, thereby minimizing emissions which are contributing to ozone exceedances.

In addition, the proposed new §115.781(b) specifies that all pressure relief valves in gaseous service which are not vented to a closed-vent system must be monitored each calendar quarter (with a hydrocarbon gas analyzer), regardless of the accessibility of the pressure relief valves. This is consistent with typical permit provisions and is necessary to detect ongoing emissions from improperly-seated pressure relief valves.

The proposed new §115.781(b) also specifies that for the hydrocarbon gas analyzer being used to monitor components for leaks, if the relative response factor multiplier of VOCs expected to be emitted from a component is greater than 1.0, then that response factor should be used to correct measured concentrations to determine if a leak is occurring. This is necessary to be able to more accurately determine the VOC concentration, which in turn will allow for a more accurate emissions inventory for use in developing control strategies toward reaching attainment with the ozone standard.

In addition, the proposed new §115.781(b) specifies that the monitored VOC concentration must be recorded for each component, rather than using notations such as "not leaking" or "below leak definition" for readings that are below the leak definition for the component, or "pegged," "off scale," or "leaking" for readings that are above the leak definition for the component.

For "pegged" readings on the hydrocarbon gas analyzer, one approach is to set the hydrocarbon gas analyzer to 10x scale or, if necessary, 100x scale. For example, a hydrocarbon gas analyzer reading of 8,000 ppmv on 10x scale means that the actual VOC concentration which must be recorded is 80,000 ppmv. If the hydrocarbon gas analyzer is still pegged on 100x scale or is not equipped with a 100x scale, a default pegged value of 500,000 ppmv is recorded.

Alternatively, if the hydrocarbon gas analyzer is not equipped with a 10x scale, a dilution probe which pulls in ambient air at a known ratio (e.g., ten-to-one) is used. For example, a hydrocarbon gas analyzer reading of 8,000 ppmv with a dilution probe using a ten-to-one dilution ratio means that the actual VOC concentration which must be recorded is 80,000 ppmv. If the hydrocarbon gas analyzer is still pegged using a dilution probe, a default pegged value of 500,000 ppmv is recorded.

This is necessary to be able to more accurately determine the VOC concentration for "pegged" components, which in turn will allow for a more accurate emissions inventory for use in developing control strategies toward reaching attainment with the ozone standard.

Similarly, the requirement to record the VOC concentration for components which are below the leak threshold will allow for a

more accurate emissions inventory for use in developing control strategies toward reaching attainment with the ozone standard.

The proposed new §115.781(c) specifies that pumps, compressors, and agitators must be inspected weekly or equipped with an alarm that alerts operators of leaks. For closed-vent systems containing bypass valves which are secured in the closed position with a car-seal or a lock-and-key type configuration, the proposed new §115.781(d) requires inspections of the seal or closure mechanism on a weekly basis and after any maintenance activity that requires the seal to be broken. These inspections are necessary to ensure the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

The proposed new §115.781(e) requires monitoring within 24 hours of any pressure relief device which has released more than ten pounds of VOC to the atmosphere and the results reported on the next working day after the release. This is necessary to ensure that the pressure relief device is not continuing to emit due to a problem such as a failure to reseal.

The proposed new §115.782, concerning Procedures and Schedule for Leak Repair and Follow-up, includes a requirement in the new §115.782(a) for the owner or operator to place a weatherproof and readily visible tag on each leaking component. This is necessary to ensure that components are easy to locate once they have been found to leak, thereby facilitating repair.

The proposed new §115.782(b) specifies that a first attempt to repair a leaking component must be made within 24 hours after the leak is detected and the leaking component must be repaired within 15 calendar days. The existing LDAR rules require repair within 15 calendar days, but allow five days for a first attempt at repair. The proposed requirement for a first attempt at repair within 24 hours after the leak is detected is necessary to minimize emissions of highly-reactive VOCs which contribute to ozone exceedances.

The proposed new §115.782(c) establishes the conditions under which repair of a leaking component may be delayed. For valves other than pressure relief valves and automatic control valves, extraordinary efforts to repair the leaking valve (e.g., drilling and injection of sealant) must be made within seven days of the valve being placed on the shutdown list. The valve can only remain on the shutdown list after a second unsuccessful attempt to repair it through extraordinary efforts, unless the owner or operator demonstrates that there is a safety, mechanical, or major environmental concern posed by repairing the leak through extraordinary means. In either case, repair of the valve must be made within four years of the original leak detection or at the next shutdown, whichever comes first. These conditions are appropriate due to the availability of sealant injection to stop leaks without needing to take the valve offline or shut down the unit, and will ensure that the best possible effort is made to repair most valve leaks without automatically placing them on the shutdown list and allowing the leak to continue unabated for as many as eight to ten years. Repair is not required if the valve is isolated from the process and does not remain in VOC service, since the valve would no longer have the potential to leak. Four years was selected because most, if not all, units will have to be shut down anyway for retrofitting to achieve the NO<sub>x</sub> reductions required by 30 TAC Chapter 117, concerning Control of Air Pollution from Nitrogen Compounds, in conjunction with the mass emissions cap and trade program of 30 TAC Chapter 101, Subchapter H, Division 3, concerning Mass Emissions Cap and Trade Program.

Four years from the anticipated effective date of the proposed Chapter 115 rules will be approximately December 31, 2006, which roughly coincides with the final NO<sub>x</sub> stepdown date at the end of the first quarter of 2007 specified in the mass emissions cap and trade program. In addition, any valves which were drilled for sealant injection as part of a repair or an attempt at repair through extraordinary means will have to be replaced at the next shutdown anyway.

For all other components, the proposed new §115.782(c) specifies that repair can be delayed if the component is isolated from the process and does not remain in VOC service. In addition, the proposed new §115.782(c) specifies that repair can be delayed if the owner or operator can document that emissions from immediate repair would be greater than the fugitive emissions resulting from delay of repair (provided that the component is repaired within four years of the original leak detection or at the next shutdown, whichever comes first). For pumps, compressors, and agitators, the proposed new §115.782(c) specifies that repair can be delayed if repair is completed within six months and includes replacing the existing seal design with either a dual mechanical seal system that includes a barrier fluid system, a system that is designed with no externally actuated shaft penetrating the housing, or a closed-vent system and control device.

The proposed new §115.782(c) also specifies that all components on the shutdown list must continue to be monitored as required by §115.781(b). This is necessary in order to be able to quantify emissions from these leaking components and identify components for which the leak has worsened, which could result in the executive director making a decision to require an early shutdown of a unit, or other appropriate action, based on the number and severity of leaks awaiting a shutdown.

The proposed new §115.782(d) establishes the requirements for monitoring and inspection following a shutdown. Specifically, follow-up monitoring and inspection of components that have been opened or repaired during a shutdown must be completed within seven days after the startup of the unit. However, commission staff has found that leaking components which have been on the shutdown list for years are sometimes not properly repaired, such that they continue to leak after the unit is started back up. In such cases, the owner or operator has placed the component back on the shutdown list, which can result in another five to eight years in which the component is continuously leaking. The commission believes that this is an unacceptable practice, and therefore has added a requirement that all components which have been on the shutdown list for at least one year must be monitored for leaks within one day after startup of the unit following the shutdown. If this monitoring reveals that the component is continuing to leak, then the unit must be shut down and the leaking component either replaced or properly repaired. This new subsection is necessary to sufficiently motivate the owner or operator to take adequate steps to eliminate the leak through a replacement or proper repair the first time, rather than allowing a leak to continue for as much as a decade or possibly even indefinitely.

The proposed new §115.782(e) includes §115.782(e)(2), which limits the percentage of non-repairable leaking components at each unit and is based on California's Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 18. Non-repairable components must be replaced within four years of the original leak detection, or at the next shutdown, whichever comes first. Four years was selected for the reasons described earlier in this preamble in the discussion on the proposed new

§115.782(c). In addition, the total number of components awaiting repair in each unit is limited to 0.05%, or 25 components, whichever is less. For example, a unit with 3,299 components would be limited to a total of 16 components awaiting repair, while a unit with 6,000 components would be limited to a total of 25 components awaiting repair. A unit with fewer than 200 components is limited to a total of one component awaiting repair.

As an alternative, the proposed new §115.782(e)(3) specifies that the owner or operator can determine each leaking component's mass emission rate using the methods in the EPA guidance document "Protocol for Equipment Leak Emission Estimates," Chapter 4, Mass Emission Sampling, (EPA-453/R-95-017, November, 1995) and repair within seven calendar days each component with emissions exceeding 15 pounds per day, provided that each unit meets limits on each component's mass emission rate and the total number of non-repairable components. In all cases, the proposed new §115.782(e)(1) specifies that the leaking components must be repaired within four years of the original leak detection or at the next shutdown, whichever comes first.

The proposed new §115.782(e)(4) specifies that for §115.782(e)(2) and (3), the total number of components in each unit is calculated as the number of components which are required to be monitored by §115.781, based on an average of the most recent four quarters.

The proposed new §115.783, concerning Equipment Standards, establishes the requirements for upgrading equipment to reduce emissions of highly-reactive VOCs. The proposed new §115.783(1) requires closed-vent systems containing bypass lines that could divert a vent stream away from the control device and to the atmosphere to have either a flow indicator that determines whether vent stream flow is present, or the bypass line valve secured in the closed position with a car-seal or a lock-and-key type configuration. This is necessary to ensure that emissions of highly-reactive VOCs, which should be controlled in a control device, are not emitted directly to the atmosphere uncontrolled and/or unnoticed by the owner or operator.

The proposed new §115.783(2) requires closed-vent systems, control devices, and recovery devices to be operating properly whenever VOC emissions are directed to them. The proposed new §115.783(2)(A) requires recovery devices (e.g., condensers and absorbers) to be designed and operated to recover the VOC emissions vented to them with an efficiency of 95% or greater. The proposed new §115.783(2)(A) requires flares to meet the requirements of the proposed new Subchapter H, Division 2, concerning Flares, and 40 CFR §60.18(b) or §63.11(b). The proposed new §115.783(2)(C) requires all other control devices to reduce VOC emissions with a control efficiency of at least 98% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% O<sub>2</sub> for combustion devices). These are all standard control requirements for properly designed and operated control devices.

The proposed new §115.783(3) requires each pressure relief valve to be equipped with a rupture disk and pressure sensing device between the pressure relief valve and the rupture disk, with failed rupture disks replaced as soon as practicable, but no later than five calendar days after the failure is detected. Rupture disks are a common method of isolating the pressure relief valve from the process, thereby preventing fugitive emissions from the pressure relief valve.

The proposed new §115.783(4) requires each pump, compressor, and agitator to be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. The proposed new §115.783(4)(A) specifies acceptable shaft sealing systems, including seals equipped with piping capable of transporting any leakage from the seal(s) back to the process, seals with a closed-vent system capable of transporting to a control device any leakage from the seal or seals, dual pump seals with a heavy liquid or non-VOC barrier fluid at higher pressure than process pressure, and seals with an automatic seal failure detection and alarm system.

The proposed new §115.783(4)(B) establishes the procedures for approval of additional shaft sealing systems, and the proposed new §115.783(4)(C) establishes the procedures for the appeal of any denial of a request for approval of an alternative shaft sealing system.

The proposed new §115.783(5) establishes the equipment standards for process drains. Specifically, the proposed new §115.783(5)(A)(i) specifies that if a process drain is controlled by water seal controls, the use of VOC rather than water as the sealing liquid in a water seal is unacceptable. This is necessary because commission staff has found an owner or operator using process VOC in this manner, with company personnel claiming that nothing prohibits this. Measurements with a hydrocarbon gas analyzer exceeded 10,000 ppmv, indicating significant emissions.

The proposed new §115.783(5)(A)(ii) further specifies that the process drain must be equipped with an alarm that alerts the operator if the water level is low and a device that continuously records the status of the water level alarm, or alternatively, a flow-monitoring device indicating either positive flow from a main to a branch water line supplying a trap or water being continuously dripped into the trap and a device that continuously records the status of water flow into the trap.

The proposed new §115.783(5)(B) specifies that if a process drain is not controlled by water seal controls, the process drain must be equipped with a gasketed seal, or a tightly-fitting cap or plug.

The proposed requirements in the new §115.783(5)(A) and (B) are necessary for the reasons described earlier in this preamble concerning the proposed new §§115.142(1)(A), 115.144(4) and (5), and 115.781(b), as well as the preceding paragraphs concerning the new §115.783(5).

The proposed requirements in the new §115.783(6) specifies that valves (other than pressure relief valves) on the shutdown list must be replaced at the next shutdown with a leakless valve (either a bellows valve or diaphragm valve), or an alternative valve design approved by the executive director.

The proposed new §115.784, concerning Prevention Measures Procedures, requires an analysis of pressure relief valve release events and is based upon BAAQMD Regulation 8, Rule 28. The proposed new §115.784(a) defines the following terms which are used in §115.784: parallel service; pressure relief device; prevention measure; process hazards analysis; qualified person; release event; and responsible manager.

The proposed new §115.784(b) establishes the prevention measures procedures. Specifically, the owner or operator must establish training, equipment, inspection, maintenance, and monitoring levels to minimize releases from pressure relief devices. The owner or operator must also use a process hazards analysis

to predict, plan, and implement prevention measures to prevent release events from pressure relief devices. Examples of prevention measures include flow, temperature, level, and pressure indicators with interlocks, deadman switches, monitors, or automatic actuators; documented and verified routine inspection and maintenance programs; inherent safer designs; and deluge systems. The proposed new §115.784(b) further specifies that the prevention measures must be approved and signed by a qualified person and a responsible manager, and submitted for review and approval by the Engineering Services Team, Office of Compliance and Enforcement.

The proposed new §115.784(c) establishes the actions to be taken if a pressure relief device has one or more release events. Specifically, within 30 days of the first release event from a pressure relief device, the owner or operator must conduct an additional, separate process hazard analysis, meet the prevention measures procedures, and conduct a failure analysis of the incident, to prevent recurrence of similar incidents. The process hazard analysis includes an evaluation of the cost-effectiveness and technical feasibility of routing emissions from the pressure relief device to a control device.

The proposed new §115.784(c) also specifies that within 15 days of the first release event, the owner or operator must equip each pressure relief device of the unit with a tamper proof tell-tale indicator that will show that a release has occurred since the last inspection. If a second release event from a pressure relief device occurs on the same unit, the owner or operator shall vent all the pressure relief devices that vent the second release event to a control device which is properly sized per manufacturer's recommendations to handle the material from all devices it is intended to serve.

The proposed new §115.784(c) further requires the owner or operator to report release events from pressure relief devices and submit a written report within 30 days following the release event. The report must include the date, time, and duration of the release event in minutes; identification of the pressure relief device; type and size of device; type and amount of material released; necessary information and assumptions used to report the duration and amount released during the event; cause of the event; a schedule for action to prevent reoccurrence of the event; and results of the monitoring (with a hydrocarbon gas analyzer) and inspection which is required within 24 hours of the release event.

The proposed new §115.785, concerning Testing Requirements, requires reference method stack testing of control devices which are used to control emissions from components in the LDAR program. This testing is necessary to determine the control efficiency of these control devices and verify that they meet or exceed the minimum acceptable control efficiencies. The proposed new §115.785 also requires the owner or operator to submit the final sampling report within 60 days after sampling is completed.

The proposed new §115.786, concerning Recordkeeping Requirements, specifies the records that the owner or operator must maintain and, in some cases, submit in order to demonstrate compliance with Subchapter H, Division 4. Specifically, for bypass lines on closed-vent systems equipped with flow monitors, the proposed new §115.786(a) requires the owner or operator to maintain records of whether the flow monitor was operating and any diversion to the bypass line.

For bypass lines on closed-vent systems in which the bypass line valve is secured in the closed position, the proposed new §115.786(b) requires the owner or operator to maintain a record

of the monthly visual inspection of the seal or closure mechanism; record the date and time of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out; and maintain records of each time the bypass line valve was opened.

The proposed new §115.786(c) requires the owner or operator to maintain records of the preventive measures procedures, process hazard analyses, and release events.

The proposed new §115.786(d) requires the owner or operator to maintain records of all non-repairable components and submit them quarterly. The report shall contain the component identification code, the component type, the leak concentration measurement and date, the date of the last process unit turnaround, and the total number of non-repairable components awaiting repair.

The proposed new §115.786(e) requires the owner or operator to maintain and update at least once every 12 months a written or electronic database for all components subject to Subchapter H, Division 4 (i.e., a master components list). The master components list must contain, at a minimum, the name of the unit where the component is located, the type of monitored component (e.g., valve or pump seal), the component identification code, type of service (gas/vapor; heavy liquid; or light liquid), the response factor for the material that the component contacts, the specific rule citation under which a component is claimed to be exempt, and the reason(s) why for the classification of certain valves as nonaccessible or unsafe to monitor.

The proposed new §115.786(f) requires the owner or operator to maintain all records for at least five years and make them available for review upon request by authorized representatives of the executive director, EPA, or local air pollution control agencies with jurisdiction. The sources subject to Chapter 115 are also subject to FCAA Title V permit requirements, which specify a five-year period for retention of compliance records.

The proposed new §115.787, concerning Exemptions, establishes exemptions for components with a low potential to emit highly-reactive VOC. Specifically, the proposed new §115.787(a) exempts components which contact a process fluid that contains less than 1.0% highly-reactive VOC by weight from the requirements of Subchapter H, Division 4, except for recordkeeping requirements necessary to document that a component qualifies for this exemption.

The proposed new §115.787(b) exempts submerged pumps or sealless pumps (e.g., diaphragm, canned, or magnetic-driven pumps) from the shaft sealing system requirements of §115.783(4) described earlier in this preamble. The proposed new §115.787(c) exempts conservation vents on atmospheric storage tanks, components in continuous vacuum service, and valves that are not externally regulated (such as in-line check valves).

The proposed new §115.788, concerning Audit Provisions, requires an audit every two years by an independent third-party organization (NOT the current LDAR contractor), with a report due within 30 days of audit completion. The auditor must include an audit of all components which were not tagged, but which should have been tagged, or which were not included in the list of components to be monitored or visually inspected, but which should have been included on that list; and the leak/no-leak status and measured VOC concentration for all components for which monitoring or visual inspection is required that monitoring period.

The audit must also include monitoring of the following number of components required to be monitored in the unit, based on an average of the most recent four quarters: for units with no more than 100 components, audit all components; for units with 101 to 9,999 components, audit the number of components determined from a graph in the rule which is designed to achieve a 95% confidence level with a 5.0% confidence interval; and for units with 10,000 components or more, audit at least 400 components. For units with 1,000 components or more, the audit can not include components which were included in either of the most recent two audits.

The audit must also include all data generated by monitoring technicians in the previous quarter, including a review of the number of components monitored per technician; a review of the time between monitoring events; identification of abnormal data patterns; and identification of any discrepancies between the data in the electronic database and the data in the datalogger and/or field notes.

In addition, the proposed new §115.788(e) specifies that staff from the commission, EPA, or local programs may conduct an audit of the LDAR program. The proposed new §115.788(e) specifies that any pressure relief device found to be leaking above 200 ppmv or any other component found to be leaking above 10,000 ppmv automatically constitutes a violation of §115.788(e). Similarly, any dripping of liquid VOC from a component at the rate or more than three drops per minute also automatically constitutes a violation of §115.788(e). In addition, the proposed new §115.788(e) specifies that if staff from the commission, EPA, or local programs detects more than a specified maximum number of gaseous leaks in a 24-hour period above 200 ppmv for pressure relief devices or 10,000 ppmv for all other components, the result is that those leaking components automatically constitute a violation of §115.788(e). This new audit provision is based upon SCAQMD Rule 1173.

The audit provisions of §115.788 are necessary to properly motivate owners and operators to implement a meaningful LDAR program, and to properly repair the more significant leaks in a timely fashion such that emissions which contribute to ozone exceedances are minimized. The EPA's National Enforcement Investigations Center (NEIC) has published the results of its audits of 47,526 components at 17 refineries in the EPA's *Enforcement Alert* (October 1999), available at: <http://es.epa.gov/oeca/ore/enfalert/propem.pdf>. The average leak rate reported by the audited refineries was 1.3%, while the average leak rate determined by NEIC was 5.0%. SCAQMD provided data from audits of 109,384 components conducted at eight refineries from 1994 through 2000. The average leak rate reported by the audited refineries was 0.40%, while the average leak rate determined by SCAQMD investigators was 1.21%. The data suggest that SCAQMD's audit program, with its automatic violations and associated financial penalties, is having the desired effect in motivating owners and operators of refineries in SCAQMD to reduce fugitive emissions by better implementation of their LDAR programs. A similarly aggressive LDAR audit program in Texas could reasonably be expected to produce similar results on refinery and non-refinery sources.

The proposed new §115.789, concerning Counties and Compliance Schedules, specifies the compliance dates and affected counties for sources subject to the new LDAR requirements. Specifically, equipment upgrades are required at the next unit shutdown after December 31, 2002, but no later than March 31, 2007. December 31, 2002 was selected as the first compliance

date because it coincides with the approximate effective date of the new rules following adoption within six months of publication of the proposal in this issue of the *Texas Register*. The March 31, 2007 date was selected as the final compliance date because that is the final compliance date for the HGA NO<sub>x</sub> reductions required by Chapter 117 and the mass emissions cap and trade program of Chapter 101, Subchapter H, Division 3. Therefore, all unit shutdowns necessary to comply with Chapters 117 and 101 are expected to occur by March 31, 2007, and the equipment upgrades for the LDAR program can be made concurrently without an additional shutdown because the units will be shut down for NO<sub>x</sub> controls anyway.

The proposed new §115.789 also specifies a compliance date of September 30, 2003 for the additional round of monitoring in the third quarter of each year. This date was selected because while compliance with this requirement requires additional manpower, it does not require equipment changes or other modifications which would justify a later compliance date. Finally, the proposed new §115.789 specifies a compliance date of December 31, 2003 for all other requirements. The proposed compliance schedule was developed to be as expeditious as practicable, with consideration and balancing between competing needs for economic reasonableness and expeditious reductions.

#### FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENT

John Davis, Analyst with Strategic Planning and Appropriations, has determined that for the first five-year period the proposed rules are in effect, the agency will be required to spend between \$260,000 to \$520,000 annually for LDAR audits on industrial components with the potential to emit VOCs. The commission anticipates no fiscal implications for any other unit of state or local government due to administration or enforcement of the proposed rules, because none of the sources which would be required to comply with the proposed Chapter 115 requirements are owned or operated by units of state and local government.

The proposed amendments to the commission's VOC rules are intended to improve implementation of the existing Chapter 115 by adding requirements to achieve reductions in emissions of highly-reactive VOCs in HGA, correcting typographical errors, updating cross-references, clarifying ambiguous language, adding flexibility, deleting obsolete language, and amending requirements to achieve the intended VOC emission reductions of the program.

#### PUBLIC BENEFITS AND COSTS

Mr. Davis determined that for each year of the first five years the proposed amendments are in effect, the public benefit anticipated from enforcement of and compliance with the proposed amendments will be potentially increased environmental protection due to reductions of public exposure to VOCs emitted from affected stationary sources, and reduction of ground-level ozone in ozone nonattainment areas.

The commission has attempted to identify all additional costs to industry due to implementation of the proposed amendments. The following analysis is organized by affected rule subchapters and only references subchapters where the commission has identified likely increased costs due to implementation of rule amendments. Although the commission has identified significant costs to industry to implement the proposed VOC rule amendments, concurrent rulemaking that proposes the revisions of NO<sub>x</sub> emission specifications for attainment demonstration (ESAD) in

30 TAC Chapter 117 is estimated to save industry considerable capital and annual operating expenses.

The proposed amendments affect a wide variety of industrial VOC sources and are intended to reduce emissions of highly-reactive VOCs from four key industrial sources: fugitives, flares, process vents, and cooling towers. Current inventory indicates that approximately 48% of the highly-reactive VOCs come from fugitives, 30% from flares, 8% from vents, and 7% from cooling towers. These types of VOC emissions occur at a wide variety of industrial sites, including petroleum refineries, synthetic organic chemical, polymer, resin, or methy tert-butyl ether manufacturing processes, and miscellaneous chemical processing and handling operations in HGA. It is also possible that natural gas/gasoline processing operations include emissions of highly-reactive VOCs, but the commission expects that any such emissions would be well below the exemption levels.

#### *Subchapter B, General Volatile Organic Compound Sources*

##### *Division 4, Industrial Wastewater*

The proposed amendments prohibit the use of VOC, rather than water, as the sealing liquid in process drains equipped with water seals and specify that a gasketed seal, or a tightly-fitting cap or plug is required on process drains not equipped with water seals. Process drains that already have water seals would be simply required to maintain the water level. Process drains that are hard piped likewise require maintenance of gasketed seals and caps or plugs. The proposed amendments also add a more explicit repair schedule, consistent with existing standard schedules, for components found to be leaking and a requirement for verifying that adequate repairs have been made. No additional cost is anticipated for these requirements.

The proposed amendments also add a new requirement that water seals be inspected on a daily basis, with process drains not equipped with water seal controls required to be inspected on a weekly basis. For the five privately-owned and operated petroleum refineries and chemical plants in the El Paso and Beaumont/Port Arthur (BPA) ozone nonattainment areas (HGA is excluded because its costs are estimated under the heading of *Subchapter H, Highly-Reactive Volatile Organic Compounds - Division 4, Fugitive Emissions*), total increased annual operating costs are estimated to be \$973,000. No capital costs are anticipated, because these provisions only require increased monitoring. It should be noted that petroleum refineries in BPA are exempt under §115.147(6) from the Chapter 115 industrial wastewater requirements. Also, §115.143(c) provides that as an alternative to complying with the Chapter 115 industrial wastewater requirements, an owner or operator may instead comply with the provisions of 40 CFR 63, Subpart G (National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater). Such sources would not be required to comply with the proposed process drain inspection requirements.

#### *Subchapter B, General Volatile Organic Compound Sources*

##### *Division 7, Flares*

The commission estimates that approximately 67 privately-owned and operated flares in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties would be required to comply with these proposed rules. This proposal would require a temperature gauge, pressure gauge, continuous flow monitor, and sampling once

every four hours. The temperature and pressure gauges shall be used for detecting the exit velocity from the flare and the sampling shall be used to determine the VOC concentration in the gas stream. Based on cost estimates from various vendors and commission staff regarding temperature gauges, pressure gauges, continuous flow monitors, and sampling expenses, the initial capital cost and any associated annual operating expenses for the first year shall be approximately \$1,115,000 for each flare in VOC service within the HGA area where highly-reactive VOC are not present in the gas stream. For subsequent years and thereafter, the annual operating cost shall be approximately \$1,095,000 for each flare in VOC service within the HGA area where highly-reactive VOC are not present in the gas stream. The total annual costs to affected industrial sites with flares in VOC service where highly-reactive VOCs are not present in the gas stream is estimated to be \$74,705,000 for the first year and \$73,365,000 for each year thereafter.

In addition, the facility shall comply with the proposed record-keeping and reporting requirements of these rules. The cost for a facility to comply with the proposed recordkeeping and reporting requirements is estimated not to exceed \$500 a year. Included in the compliance cost is the purchase of filing space and administrative supplies, printing of records, and the initial training of persons responsible for maintaining the records.

#### *Subchapter B, General Volatile Organic Compound Sources*

##### *Division 8, Cooling Tower Heat Exchange Systems*

The commission estimates that approximately 115 privately-owned and operated cooling tower heat exchange systems in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties would be required to comply with the proposed rule amendments of this subchapter. This proposal would require cooling tower heat exchange systems to have continuous flow monitors on the inlet and outlet of each cooling tower and sample twice a week to determine the concentration of all speciated VOCs in the process stream.

Based on cost estimates from various vendors and commission staff regarding the purchase and installation of continuous flow monitors and sampling expenses, the initial capital cost, and with any associated annual operating expenses for the first year shall be approximately \$70,000 for each cooling tower heat exchange system in the HGA area. For subsequent years and thereafter, the annual operating cost shall be approximately \$52,000 for each cooling tower heat exchange system in the HGA area. The total annual costs to affected industrial sites for the cooling tower rule amendments is estimated to be \$8,100,000 for the first year and \$6,000,000 for each year thereafter. Of note, these amendments would not apply to fin-fan coolers or comfort cooling tower heat exchange systems used exclusively for cooling.

In addition, the facility shall comply with the proposed record-keeping and reporting requirements of these rules. The cost for a facility to comply with the proposed recordkeeping and reporting requirements is estimated not to exceed \$500 a year. Included in the compliance cost is the purchase of filing space and administrative supplies, printing of records, and the initial training of persons responsible for maintaining the records.

#### *Subchapter D, Petroleum Refining, Natural Gas Processing, and Petrochemical Processes*

##### *Division 2, Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties*

The proposed amendments revise the record retention time for petroleum refineries in Gregg, Nueces, and Victoria Counties from two years to five years for consistency. The sources subject to Chapter 115 are also subject to FCAA Title V permit requirements, which specify a five-year period for retention of compliance records. Therefore, no additional cost is anticipated due to retaining existing records for a longer period of time.

The proposed amendments also require the owner or operator to record the date on which a leaking component is placed on the shutdown list. The commission estimates that approximately six privately-owned and operated petroleum refineries in Gregg, Nueces, or Victoria Counties would be required to maintain compliance records due to implementation of the proposed rules. Based on information from the commission's regional inspectors, most, if not all, of the affected facilities already comply with the proposed recordkeeping requirements in order to comply with similar recordkeeping requirements of a federal fugitive monitoring program under federal rules. In the event that a facility does not already comply with the proposed recordkeeping requirements, the cost for a facility to comply with the proposed recordkeeping requirements is estimated not to exceed \$500 a year. Included in the compliance cost is the purchase of filing space and administrative supplies, printing of records, and the initial training of persons responsible for maintaining the records.

#### *Subchapter D, Petroleum Refining, Natural Gas Processing, and Petrochemical Processes*

##### *Division 3, Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas*

The commission estimates that approximately 140 to 215 privately-owned and operated petroleum refineries; synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing processes; and natural gas/gasoline processing operations in Brazoria, Chambers, Collin, El Paso, Dallas, Denton, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties would be required to comply with the proposed rule amendments of this subchapter.

The proposed amendments would require the owner or operator to submit documentation that the total cumulative emissions from leaking components in the unit are less than 50% of the emissions resulting from shutdown of the unit. The cost for a facility to comply with this recordkeeping requirement is estimated not to exceed \$500 a year. Included in the compliance cost is the purchase of filing space and administrative supplies, printing of records, and the initial training of persons responsible for maintaining the records. The total cost to privately-owned and operated businesses are estimated not to exceed approximately \$107,500 a year.

The proposed amendments also specify circumstances in which delay of repair beyond a unit shutdown is allowed for a valve. Because this adds an option which is not currently available, no costs are anticipated.

In addition, the proposed amendments specify that all components that have been opened or repaired during a shutdown must be monitored for leaks (with a hydrocarbon gas analyzer) within seven days after startup is completed following the shutdown. The cost depends on the number of leaking components that were repaired during a shutdown. Assuming a 5.0% component leak rate, one shutdown every four years, and a labor cost of \$.50

to \$1.00 per component, estimated annual costs are \$22,500 to \$45,000. No capital costs are anticipated.

The proposed amendments also revise the record retention time from two years to five years for consistency. The sources subject to Chapter 115 are also subject to FCAA Title V permit requirements, which specify a five-year period for retention of compliance records. Therefore, no additional cost is anticipated due to retaining existing records for a longer period of time.

In addition, the proposed amendments require records of the results of the weekly audio, visual, and olfactory inspections of flanges, records of the hydrocarbon gas analyzer's calibration gas values and the instrument reading, records of the date on which a leaking component is placed on the shutdown list, and a master components list. The cost for a facility to comply with this recordkeeping requirement is estimated not to exceed \$500 a year. Included in the compliance cost is the purchase of filing space and administrative supplies, printing of records, and the initial training of persons responsible for maintaining the records. The total cost to privately-owned and operated businesses are estimated not to exceed approximately \$107,500 a year.

#### *Subchapter H, Highly-Reactive Volatile Organic Compounds*

##### *Division 1, Vent Gas Control*

The commission estimates that approximately 144 privately-owned and operated refineries and chemical manufacturing or processing operations in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties would be required to comply with the proposed rule amendments to this subchapter. The proposed amendments require one-time testing with a portable analyzer, or by applying the appropriate reference method tests, on approximately 1,333 vents for which the owners or operators have claimed exemption. The estimated total one-time cost of the testing for VOC concentration is \$1,000 per vent, or a total of is \$1,333,000.

Vent gas streams which are above specified thresholds must be controlled using a pollution control device. Estimated control device capital and annual operating costs are estimated to be \$600,000 and \$360,000. Assuming that all 1,333 uncontrolled vents will have to be controlled and that, on average, each of the 144 accounts will have to install one new control device to control the previously uncontrolled vents, total estimated capital costs are \$86,400,000. Estimated total annual operating costs are \$51,840,000.

In addition, the proposed amendments require stack testing of all 215 non-flare control devices used to control vent gas streams to confirm that the control efficiency requirements are being met. The total estimated cost for this one-time testing is \$9,000 per Test Method 25A stack test, or a total of \$1,935,000.

#### *Subchapter H, Highly-Reactive Volatile Organic Compounds*

##### *Division 2, Flares*

The commission estimates that approximately 337 privately-owned and operated flares in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties would be required to comply with the proposed rule amendments of this subchapter. This proposal would require a temperature gauge, pressure gauge, continuous flow monitor, and an on-line gas analyzer (used for sampling purposes). The temperature and pressure gauges shall be used for detecting the exit velocity from the flare and the on-line analyzer shall be used to sample the gas stream at least once every 15

minutes for the purposes of detecting all highly-reactive VOC concentrations in the gas stream. Based on cost estimates from various vendors that sell temperature gauges, pressure gauges, continuous flow monitors, and on-line gas analyzers, the initial capital cost and any associated annual operating expenses for the first year shall be approximately \$90,000 for each flare in highly-reactive VOC service within the HGA area. For subsequent years and thereafter, the annual operating cost shall be approximately \$20,000 for each flare in highly-reactive VOC service within the HGA area. The total annual costs to affected industrial sites with flares in VOC service where highly-reactive VOCs are present in the gas stream is estimated to be \$30,330,000 for the first year and \$6,740,000 for each year thereafter.

In addition, the facility shall comply with the proposed record-keeping and reporting requirements of these rules. The cost for a facility to comply with the proposed recordkeeping and reporting requirements is estimated not to exceed \$500 a year. Included in the compliance cost is the purchase of filing space and administrative supplies, printing of records, and the initial training of persons responsible for maintaining the records.

#### *Subchapter H, Highly-Reacting Volatile Organic Compounds*

##### *Division 3, Cooling Tower Heat Exchange Systems*

The commission estimates that approximately 68 privately-owned and operated cooling tower heat exchange systems in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties would be required to comply with this proposed rule amendments of this subchapter. The commission does not have a breakout of the capacities for each of the affected cooling towers; therefore, a total cost will not be provided. The first part of this cost estimate is applicable to cooling tower heat exchange systems that are equal to or greater than 8,000 gpm of cooling water circulated. These systems would require continuous flow monitors on the inlet and outlet of each cooling tower, continuous VOC monitors on the inlet and outlet of each cooling tower and an on-line gas analyzer used in the analysis for determining the highly-reactive VOC concentration in the process stream.

Based on cost estimates from various vendors and commission staff regarding the purchase and installation of continuous flow monitors, continuous VOC monitors (capable of detecting highly-reactive VOC), and on-line gas analyzers, the initial capital cost and with any associated annual operating expenses for the first year shall be approximately \$88,000 for each cooling tower heat exchange system in the HGA area. For subsequent years and thereafter, the annual operating cost shall be approximately \$20,000 for each cooling tower heat exchange system equal to or greater than 8,000 gpm of cooling water circulated in the HGA area.

For cooling tower heat exchange systems less than 8,000 gpm of cooling water circulated, continuous flow monitors shall be installed on the inlet and outlet of each cooling tower and sampling shall be performed twice a week to determine the concentration of all highly-reactive VOC in the process stream.

Based on cost estimates from various vendors and commission staff regarding the purchase and installation of continuous flow monitors and sampling expenses, the initial capital cost and with any associated annual operating expenses for the first year shall be approximately \$70,000 for each cooling tower heat exchange system in the HGA area. For subsequent years and thereafter, the annual operating cost shall be approximately \$52,000 for

each cooling tower heat exchange system less than 8,000 gpm of cooling water circulated in the HGA area.

In addition, the facility shall comply with the proposed record-keeping and reporting requirements of these rules. The cost for a facility to comply with the proposed recordkeeping and reporting requirements is estimated not to exceed \$500 a year. Included in the compliance cost is the purchase of filing space and administrative supplies, printing of records, and the initial training of persons responsible for maintaining the records.

#### *Subchapter H, Highly-Reacting Volatile Organic Compounds*

##### *Division 4, Fugitive Emissions*

The commission estimates that approximately 121 privately-owned and operated petroleum refineries and synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing processes in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties would be required to comply with the proposed rules. Natural gas/gasoline processing operations are not expected to be affected because they do not handle any highly-reactive VOC as a raw material, intermediate, final product, or in a waste stream.

The proposed amendments would eliminate the availability of the leak-skip option for valves, and would require an additional round of monitoring during the third quarter (July - September) of each year. Assuming that half the valves are monitored annually under the leak-skip option (with the remainder monitored quarterly) and a labor cost of \$.50 to \$1.00 per component, estimated costs to increase the monitoring frequency of the currently-monitored components to quarterly are \$3,256,000 to \$6,512,000 per year.

The proposed amendments would also require quarterly monitoring for a variety of components that have been found to leak, yet in most cases are not currently required to be monitored. These components include: blind flanges, caps, or plugs at the end of a pipe or line containing VOC; connectors; heat exchanger heads; sight glasses; meters; gauges; sampling connections; bolted manways; hatches; agitators; sump covers; stormwater drains; junction box vents; covers and seals on VOC water separators; and process drains. Assuming four of these "nontraditional" components (mostly connectors) for every "traditional" monitored component and a labor cost of \$.50 to \$1.00 per component, estimated annual costs to monitor the nontraditional components on a quarterly basis are \$26,046,000 to \$52,093,000 per year.

The proposed amendments also add a new requirement that water seals be inspected on a daily basis, with process drains not equipped with water seal controls required to be inspected on a weekly basis. Total annual operating costs are estimated to be \$19,570,000. No capital costs are anticipated.

The proposed amendments require that pumps, compressors, and agitators be inspected weekly or equipped with an alarm that alerts operators of leaks. For closed-vent systems containing bypass valves which are secured in the closed position with a car-seal or a lock-and-key type configuration, the proposed amendments require inspections of the seal or closure mechanism on a weekly basis and after any maintenance activity that requires the seal to be broken. Total annual operating costs are estimated to be \$661,000. No capital costs are anticipated.

The proposed amendments establish the conditions under which repair of a leaking component may be delayed, and require that for valves other than pressure relief valves and automatic control valves, extraordinary efforts to repair the leaking valve (e.g.,

drilling and injection of sealant) must be made within seven days of the valve being placed on the shutdown list, with some exceptions. Assuming one shutdown every four years and approximately one valve on the shutdown list out of every 84 traditional components, and a cost of \$150 for on-line repair of each valve, the estimated annual cost of drilling the valve bonnet and injecting sealant is \$16,662,000 to \$39,862,000.

Drilling the valve bonnet means that the valve must be replaced at the next shutdown. The proposed amendments require that the valve be replaced with a leakless valve (bellows valve, diaphragm valve, or equivalent) at the next shutdown. Labor and valve repair or replacement would occur regardless, so the cost is the incremental cost of leakless valves over conventional valves. Assuming one shutdown every four years and approximately one valve on the shutdown list out of every 84 traditional components, the estimated annual cost of upgrading to leakless valves is \$9,300,000 to \$38,700,000.

The proposed amendments specify that all components that have been opened or repaired during a shutdown must be monitored for leaks (with a hydrocarbon gas analyzer) within seven days after startup is completed following the shutdown. The cost is included in the estimated cost of the corresponding requirement described under the heading of *Subchapter D, Petroleum Refining, Natural Gas Processing, and Petrochemical Processes - Division 3, Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas*.

The proposed amendments include a limit on the percentage of non-repairable leaking components at each unit. The estimated cost is included in the cost of sealant injection described earlier in this cost note, because sealant injection is a primary way to comply with the limit on non-repairable leaking components.

The proposed amendments require closed-vent systems containing bypass lines that could divert a vent stream away from the control device and to the atmosphere to have either a flow indicator that determines whether vent stream flow is present, or the bypass line valve secured in the closed position with a car-seal or a lock-and-key type configuration. The cost of a car-seal is negligible and is expected to be the preferred method of compliance.

The proposed amendments require each pressure relief valve to be equipped with a rupture disk and pressure sensing device between the pressure relief valve and the rupture disk, with failed rupture disks replaced within five days after the failure is detected. Rupture disks are a common method of isolating the pressure relief valve from the process, thereby preventing fugitive emissions from the pressure relief valve. Assuming a two-year service life, the estimated annual cost of rupture disks is \$2,035,000.

The proposed amendments require each pump, compressor, and agitator to be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Acceptable shaft sealing systems include seals equipped with piping capable of transporting any leakage from the seal(s) back to the process, seals with a closed-vent system capable of transporting to a control device any leakage from the seal or seals, dual pump seals with a heavy liquid or non-VOC barrier fluid at higher pressure than process pressure, and seals with an automatic seal failure detection and alarm system. Assuming a ten-year service life, the estimated annual cost of shaft sealing systems is \$15,264,000.

The proposed amendments require daily inspections for all process drains equipped with water seals, with process drains without water seals required to be inspected on a weekly basis. For the 121 privately-owned and operated facilities in HGA, total annual operating costs are estimated to be \$19,570,000. No capital costs are anticipated.

The proposed amendments specify that the process drain must be equipped with an alarm that alerts the operator if the water level is low and a device that continuously records the status of the water level alarm. For the 121 privately-owned and operated facilities in HGA, total capital costs are estimated to be \$70,400,000.

The proposed amendments require stack testing of all non-flare control devices used to which emissions from components are vented in order to confirm that the control efficiency requirements are being met. The cost of this testing is included in the estimated cost of control device testing described under the heading of *Subchapter H, Highly-Reactive Volatile Organic Compounds - Division 1, Vent Gas Control*.

The proposed amendments require an audit every two years by an independent third party organization (i.e., not the current LDAR contractor), with a report due within 30 days of audit completion. Assuming 2,000 components per unit, with 400 components audited per unit at a labor cost of \$.50 to \$1.00 per component, estimated annual costs are \$260,466 to \$520,930.

#### SMALL BUSINESS AND MICRO-BUSINESS ASSESSMENT

The commission has been unable to identify any small or micro-businesses which would be affected by the proposed rules. The majority of sites affected by the proposed rules are large petrochemical and industrial businesses. If there are affected small or micro-businesses, the estimated capital and annualized cost in this fiscal note would appear to be a reasonable cost estimate for small or micro-businesses.

#### LOCAL EMPLOYMENT IMPACT STATEMENT

The commission has reviewed this proposed rulemaking and determined that a local employment impact statement is not required because the proposed rules do not adversely affect a local economy in a material way for the first five years that the proposed rules are in effect. Although the commission has identified significant costs to industry to implement the proposed VOC rule amendments, concurrent rulemaking that proposes the revisions of NO<sub>x</sub> ESADs is estimated to save industry considerable capital and annual operating expenses.

#### DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission has reviewed the proposed rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and has determined that the rulemaking meets 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, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state.

The proposed amendments to Chapter 115 and revisions to the SIP would improve implementation of the existing Chapter 115 by adding requirements to achieve reductions in emissions of highly-reactive VOC in the HGA ozone nonattainment area. The rules are intended to protect the environment and reduce risks

to human health and safety from environmental exposure and may have adverse effects on owners and operators of certain sources, in particular fugitives, flares, process vents, and cooling towers. Many of these sources are owned or operated by utilities, petrochemical plants, refineries, and other industrial, commercial, or institutional groups, and each group could be considered a sector of the economy. This is based on the analysis provided elsewhere in this preamble, including the discussion in the PUBLIC BENEFITS AND COSTS section of this proposal. The remaining amendments in this rulemaking are intended to correct typographical errors, update cross-references, clarify ambiguous language, add flexibility and delete obsolete language, and these amendments are not expected to adversely affect in a material way the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state.

The proposed amendments do not meet any of the four applicability criteria of a "major environmental rule" as defined in the Texas Government Code. Section 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.

The amendments implement requirements of the FCAA. Under 42 USC, §7410, states are required to adopt a SIP which provides for "implementation, maintenance, and enforcement" of the primary NAAQS in each air quality control region of the state. While 42 USC, §7410, does not require specific programs, methods, or reductions in order to meet the standard, SIPs 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," (meaning Chapter 85, Air Pollution Prevention and Control). It is true that the FCAA does require some specific measures for SIP purposes, such as the inspection and maintenance program, but those programs are the exception, not the rule, in the SIP structure of the FCAA. 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. Thus, while specific measures are not generally required, the emission reductions are required. States are not free to ignore the requirements of 42 USC, §7410, and must develop programs to assure that the nonattainment areas of the state will be brought into attainment on schedule.

The requirement to provide a fiscal analysis of proposed regulations in the Texas Government Code were amended by Senate Bill (SB) 633 during the 75th Legislative Session. The intent of SB 633 was to require agencies to conduct an regulatory impact analysis (RIA) 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 that concluded "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 require specific programs, methods, or reductions in order to meet the NAAQS; thus, states must develop programs for each nonattainment area to ensure that area will meet the attainment deadlines. Because of the ongoing need to address nonattainment issues, the commission routinely proposes and adopts SIP rules. The legislature is presumed to understand this federal scheme. If each rule proposed for inclusion in the SIP was considered to be a major environmental rule that exceeds federal law, then every SIP rule would require the full RIA 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 RIA for rules that are extraordinary in nature. While the SIP rules will have a broad impact, that impact is no greater than is necessary or appropriate to meet the requirements of the FCAA. For these reasons, rules adopted for inclusion in the SIP fall under the exception in Texas Government Code, §2001.0225(a), because they are specifically required by federal law.

In addition, 42 USC, §7502(a)(2), requires attainment as expeditiously as practicable, and 42 USC, §7511a(d), requires states to submit ozone attainment demonstration SIPs for severe ozone nonattainment areas such as HGA. The proposed rules, which will reduce ambient highly-reactive VOC and ozone in HGA, will be submitted to the EPA as one of several measures in the federally approved SIP. As discussed earlier in this preamble, controls on upsets and routine industrial VOC emissions are necessary to address some of the elevated ozone levels observed in HGA; these controls will result in reductions in ozone formation in the HGA ozone nonattainment area and help bring HGA into compliance with the air quality standards established under federal law as NAAQS for ozone. As discussed in Chapter 7 of the HGA SIP, this revision is another phase in the process of continued analysis and review of the science, and the data collected as a result of these revisions will further assist the commission as it develops its full reassessment of the attainment demonstration at the mid-course review. Therefore, the proposed amendments are necessary components of and consistent with the ozone attainment demonstration SIP for HGA, required by 42 USC, §7410.

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); *Sharp v. House of Lloyd, Inc.*, 815 S.W.2d 245 (Tex. 1991); *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).

As discussed earlier in this preamble, this rulemaking implements requirements of the FCAA. There is no contract or delegation agreement that covers the topic that is the subject of this rulemaking. Therefore, the proposed rules do not exceed a standard set by federal law, exceed an express requirement of state law, exceed a requirement of a delegation agreement, nor are adopted solely under the general powers of the agency. In addition, the rules are proposed under the Texas Health and Safety Code (THSC), Texas Clean Air Act (TCAA), §§382.011, 382.012, 382.014, 382.016, 382.017, 382.021, 382.034 and 382.051(d). The commission invites public comment on the draft RIA.

#### TAKINGS IMPACT ASSESSMENT

The commission completed a takings impact analysis for the proposed rules under Texas Government Code, §2007.043. The specific purposes of these amendments are to achieve reductions in highly-reactive VOC emissions and ozone formation in the HGA ozone nonattainment area and help bring HGA into compliance with the air quality standards established under federal law as NAAQS for ozone, as well as to improve implementation of the existing Chapter 115 by correcting typographical errors, updating cross-references, clarifying ambiguous language, adding flexibility, and deleting obsolete language. If adopted, certain sources located in HGA will be required to install equipment to monitor emissions and achieve reductions in emissions of highly-reactive VOC in the HGA ozone nonattainment area, and implement new reporting and recordkeeping requirements. Installation of the necessary equipment could conceivably place a burden on private, real property.

Texas Government Code, §2007.003(b)(4), provides that Chapter 2007 does not apply to these proposed rules, because they are reasonably taken to fulfill an obligation mandated by federal law. The emission limitations and control requirements within this rulemaking were developed in order to meet the NAAQS for ozone set by the EPA under 42 USC, §7409. States are primarily responsible for ensuring attainment and maintenance of NAAQS once the EPA has established them. Under 42 USC, §7410, and related provisions, states must submit, for approval by the EPA, SIPs that provide for the attainment and maintenance of NAAQS through control programs directed to sources of the pollutants involved. Therefore, one purpose of this rulemaking action is to meet the air quality standards established under federal law as NAAQS. Attainment of the ozone standard will eventually require reductions of highly-reactive VOC emissions, as well as substantial reductions in NO<sub>x</sub> emissions. Any VOC reductions resulting from the current rulemaking are no greater than what scientific research indicates is necessary to achieve the desired ozone levels. However, this rulemaking is only one step among many necessary for attaining the ozone standard.

In addition, Texas Government Code, §2007.003(b)(13), states that Chapter 2007 does not apply to an action that: 1) is taken in response to a real and substantial threat to public health and safety; 2) is designed to significantly advance the health

and safety purpose; and 3) does not impose a greater burden than is necessary to achieve the health and safety purpose. Although the rule revisions do not directly prevent a nuisance or prevent an immediate threat to life or property, they do prevent a real and substantial threat to public health and safety and significantly advance the health and safety purpose. This action is taken in response to the HGA area exceeding the federal ambient air quality standard for ground-level ozone, which adversely affects public health, primarily through irritation of the lungs. The action significantly advances the health and safety purpose by reducing ozone levels in the HGA nonattainment area. Consequently, these proposed rules meet the exemption in §2007.003(b)(13). This rulemaking action therefore meets the requirements of Texas Government Code, §2007.003(b)(4) and (13). For these reasons, the proposed rules do not constitute a takings under Chapter 2007.

#### CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed the proposed rulemaking and found that the proposal is a rulemaking identified in Coastal Coordination Act Implementation Rules, 31 TAC §505.11, or will affect an action/authorization identified in Coastal Coordination Act Implementation Rules, 31 TAC §505.11, and therefore will require that applicable goals and policies of the Coastal Management Program be considered during the rulemaking process.

The commission prepared a preliminary consistency determination for the proposed rules under 31 TAC §505.22 and found that the proposed rulemaking is consistent with the applicable CMP goals and policies. The CMP goal applicable to this rulemaking action is the goal to protect, preserve, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas (31 TAC §501.12(1)). No new sources of air contaminants will be authorized and ozone levels will be reduced as a result of these proposed rules. The CMP policy applicable to this rulemaking action is the policy that commission rules comply with regulations in 40 CFR, to protect and enhance air quality in the coastal area (31 TAC §501.14(q)). This rulemaking action complies with 40 CFR. Therefore, in compliance with 31 TAC §505.22(e), this rulemaking action is consistent with CMP goals and policies. Interested persons may submit comments on the consistency of the proposed rules with the CMP during the public comment period.

#### EFFECT ON SITES SUBJECT TO THE FEDERAL OPERATING PERMIT PROGRAM

Chapter 115 is an applicable requirement under 30 TAC Chapter 122; therefore, owners or operators subject to the Federal Operating Permit Program must, consistent with the revision process in Chapter 122, revise their operating permits to include the revised Chapter 115 requirements for each emission unit affected by the revisions to Chapter 115 at their sites.

#### ANNOUNCEMENT OF HEARINGS

Public hearings for this proposed rulemaking have been scheduled for the following times and locations: July 18, 2002, 2:00 p.m., Texas Natural Resource Conservation Commission, 12100 North I-35, Building E, Room 201S, Austin; July 22, 2002, 10:00 a.m., City of Houston, City Council Chambers, 2nd Floor, 901 Bagby, Houston; as well as July 22, 2002, 7:00 p.m., Flukinger Community Center, 16003 Lorenzo, Channelview. The hearings will be structured for the receipt of oral or written comments by interested persons. Registration will begin 30 minutes prior to the hearings. Individuals may present oral statements when called

upon in order of registration. A four-minute time limit may be established at the hearings to assure that enough time is allowed for every interested person to speak. There will be no open discussion during the hearings; however, commission staff members will be available to discuss the proposal 30 minutes before the hearings and will answer questions before and after the hearings.

Persons planning to attend the hearings who have special communication or other accommodation needs, should contact the Office of Environmental Policy, Analysis, and Assessment at (512) 239-4900. Requests should be made as far in advance as possible.

#### SUBMITTAL OF COMMENTS

Written comments may be submitted to Kelly Keel, MC 206, Office of Environmental Policy, Analysis, and Assessment, Texas Natural Resource Conservation Commission, P.O. Box 13087, Austin, Texas 78711-3087, faxed to (512) 239-4808, or emailed to [siprules@tceq.state.tx.us](mailto:siprules@tceq.state.tx.us). All comments should reference Rule Log Number 2002-046b- 115-AI. Comments must be received by 5:00 p.m., July 22, 2002, although oral and written comments submitted at the 7:00 p.m. July 22, 2002 hearing will be accepted. For further information, please contact Brad Oehler of the Strategic Assessment Division at (512) 239-0599 or Eddie Mack, also of the Strategic Assessment Division, at (512) 239-1488.

### SUBCHAPTER A. DEFINITIONS

#### 30 TAC §115.10

##### STATUTORY AUTHORITY

The amendment is proposed under Texas Water Code (TWC), §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendment is also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed amendment implements TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

##### §115.10. Definitions.

Unless specifically defined in the Texas Clean Air Act (TCAA) or in the rules of the commission, the terms used by the commission have

the meanings commonly ascribed to them in the field of air pollution control. In addition to the terms which are defined by the TCAA, the following terms, when used in this chapter (relating to Control of Air Pollution from Volatile Organic Compounds), shall have the following meanings, unless the context clearly indicates otherwise. Additional definitions for terms used in this chapter are found in §3.2 and §101.1 [and §3-2] of this title (relating to Definitions).

(1) Background -- The ambient concentration of volatile organic compounds (VOC) in the air, determined at least one meter upwind of the component to be monitored. Test Method 21 (40 Code of Federal Regulations (CFR) 60, Appendix A) shall be used to determine the background.

(2) [~~1~~] Beaumont/Port Arthur area -- Hardin, Jefferson, and Orange Counties.

(3) [~~2~~] Capture efficiency -- The amount of VOC [~~volatile organic compounds (VOC)~~] collected by a capture system which is expressed as a percentage derived from the weight per unit time of VOC entering a capture system and delivered to a control device divided by the weight per unit time of total VOC generated by a source of VOC.

(4) [~~3~~] Carbon adsorption system -- A carbon adsorber with an inlet and outlet for exhaust gases and a system to regenerate the saturated adsorbent.

(5) Closed-vent system -- A system that:

(A) is not open to the atmosphere;

(B) is composed of pipng, ductwork, connections, and, if necessary, flow-inducing devices; and

(C) transports gas or vapor from a piece or pieces of equipment to a control device.

(6) [~~4~~] Component -- A piece of equipment, including, but not limited to, pumps, valves, compressors, connectors, and pressure relief valves, which has the potential to leak VOC.

(7) Connector -- A flanged, screwed, or other joined fitting used to connect two pipe lines or a pipe line and a piece of equipment. The term connector does not include joined fittings welded completely around the circumference of the interface.

(8) [~~5~~] Continuous monitoring -- Any monitoring device used to comply with a continuous monitoring requirement of this chapter will be considered continuous if it can be demonstrated that at least 95% of the required data is captured.

(9) [~~6~~] Covered attainment counties -- Anderson, Angelina, Aransas, Atascosa, Austin, Bastrop, Bee, Bell, Bexar, Bosque, Bowie, Brazos, Burleson, Caldwell, Calhoun, Camp, Cass, Cherokee, Colorado, Comal, Cooke, Coryell, De Witt, Delta, Ellis, Falls, Fannin, Fayette, Franklin, Freestone, Goliad, Gonzales, Grayson, Gregg, Grimes, Guadalupe, Harrison, Hays, Henderson, Hill, Hood, Hopkins, Houston, Hunt, Jackson, Jasper, Johnson, Karnes, Kaufman, Lamar, Lavaca, Lee, Leon, Limestone, Live Oak, Madison, Marion, Matagorda, McLennan, Milam, Morris, Nacogdoches, Navarro, Newton, Nueces, Panola, Parker, Polk, Rains, Red River, Refugio, Robertson, Rockwall, Rusk, Sabine, San Jacinto, San Patricio, San Augustine, Shelby, Smith, Somervell, Titus, Travis, Trinity, Tyler, Upshur, Van Zandt, Victoria, Walker, Washington, Wharton, Williamson, Wilson, Wise, and Wood Counties.

(10) [~~7~~] Dallas/Fort Worth area -- Collin, Dallas, Denton, and Tarrant Counties.

(11) [~~8~~] El Paso area -- El Paso County.

(12) [(9)] External floating roof -- A cover or roof in an open-top tank which rests upon or is floated upon the liquid being contained and is equipped with a single or double seal to close the space between the roof edge and tank shell. A double seal consists of two complete and separate closure seals, one above the other, containing an enclosed space between them. For the purposes of this chapter [~~relating to Control of Air Pollution from Volatile Organic Compounds~~], an external floating roof storage tank which is equipped with a self-supporting fixed roof (typically a bolted aluminum geodesic dome) shall be considered to be an internal floating roof storage tank.

(13) [(40)] Fugitive emission -- Any VOC entering the atmosphere which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening designed to direct or control its flow.

(14) [(44)] Gasoline bulk plant -- A gasoline loading and/or unloading facility, excluding marine terminals, having a gasoline throughput less than 20,000 gallons (75,708 liters) per day, averaged over each consecutive 30-day period. A motor vehicle fuel dispensing facility is not a gasoline bulk plant.

(15) [(42)] Gasoline terminal -- A gasoline loading and/or unloading facility, excluding marine terminals, having a gasoline throughput equal to or greater than 20,000 gallons (75,708 liters) per day, averaged over each consecutive 30-day period.

(16) Heavy liquid -- VOCs which have a true vapor pressure equal to or less than 0.044 pounds per square inch absolute (psia) (0.3 kPa) at 68 degrees Fahrenheit (20 degrees Celsius).

(17) Highly-reactive volatile organic compound (VOC) -- One or more of the following VOCs: acetaldehyde; 1,3-butadiene; all butenes (butylenes); ethylene; all ethyltoluenes; formaldehyde; isoprene; all pentenes; propylene; toluene; all trimethylbenzenes; and all xylenes.

(18) [(43)] Houston/Galveston area -- Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties.

(19) [(44)] Incinerator -- For the purposes of this chapter [~~relating to Control of Air Pollution from Volatile Organic Compounds~~], an enclosed control device that combusts or oxidizes VOC gases or vapors.

(20) [(45)] Internal floating cover -- A cover or floating roof in a fixed roof tank which rests upon or is floated upon the liquid being contained, and is equipped with a closure seal or seals to close the space between the cover edge and tank shell. For the purposes of this chapter [~~relating to Control of Air Pollution from Volatile Organic Compounds~~], an external floating roof storage tank which is equipped with a self-supporting fixed roof (typically a bolted aluminum geodesic dome) shall be considered to be an internal floating roof storage tank.

[(16)] Liquefied petroleum gas -- Any material that is composed predominantly of any of the following hydrocarbons or mixtures of hydrocarbons: propane, propylene, normal butane, isobutane, and butylenes.

(21) [(47)] Leak-free marine vessel -- A marine vessel whose cargo tank closures (hatch covers, expansion domes, ullage openings, butterworth covers, and gauging covers) were inspected prior to cargo transfer operations and all such closures were properly secured such that no leaks of liquid or vapors can be detected by sight, sound, or smell. Cargo tank closures shall meet the applicable rules or regulations of the marine vessel's classification society or flag state. Cargo tank pressure/vacuum valves shall be operating within the range specified by the marine vessel's classification society or flag state and

sealed when tank pressure is less than 80% of set point pressure such that no vapor leaks can be detected by sight, sound, or smell. As an alternative, a marine vessel operated at negative pressure is assumed to be leak-free for the purpose of this standard.

(22) Light liquid -- VOCs which have a true vapor pressure greater than 0.044 psia (0.3 kPa) at 68 degrees Fahrenheit (20 degrees Celsius), and are a liquid at operating conditions.

(23) Liquefied petroleum gas -- Any material that is composed predominantly of any of the following hydrocarbons or mixtures of hydrocarbons: propane, propylene, normal butane, isobutane, and butylenes.

(24) [(48)] Marine loading facility -- The loading arm(s), pumps, meters, shutoff valves, relief valves, and other piping and valves that are part of a single system used to fill a marine vessel at a single geographic site. Loading equipment that is physically separate (i.e., does not share common piping, valves, and other loading equipment) is considered to be a separate marine loading facility.

(25) [(49)] Marine loading operation -- The transfer of oil, gasoline, or other volatile organic liquids at any affected marine terminal, beginning with the connections made to a marine vessel and ending with the disconnection from the marine vessel.

(26) [(20)] Marine terminal -- Any marine facility or structure constructed to transfer oil, gasoline, or other volatile organic liquid bulk cargo to or from a marine vessel. A marine terminal may include one or more marine loading facilities.

(27) Metal-to-metal seal -- A connection formed by a swage ring which exerts an elastic, radial preload on narrow sealing lands, plastically deforming the pipe being connected, and maintaining sealing pressure indefinitely.

(28) [(24)] Natural gas/gasoline processing -- A process that extracts condensate from gases obtained from natural gas production and/or fractionates natural gas liquids into component products, such as ethane, propane, butane, and natural gasoline. The following facilities shall be included in this definition if, and only if, located on the same property as a natural gas/gasoline processing operation previously defined: compressor stations, dehydration units, sweetening units, field treatment, underground storage, liquified natural gas units, and field gas gathering systems.

(29) [(22)] Petroleum refinery -- Any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of crude oil, or through the redistillation, cracking, extraction, reforming, or other processing of unfinished petroleum derivatives.

(30) [(23)] Polymer or resin manufacturing process -- A process that produces any of the following polymers or resins: polyethylene, polypropylene, polystyrene, and styrenebutadiene latex.

(31) Pressure relief valve -- A safety device used to prevent operating pressures from exceeding the maximum allowable working pressure of the process equipment. A pressure relief valve is automatically actuated by the static pressure upstream of the valve, but does not include:

(A) a rupture disk; or

(B) a conservation vent or other device on an atmospheric storage tank that is actuated either by a vacuum or a pressure of no more than 2.5 pounds per square inch gauge (psig).

(32) [(24)] Printing line -- An operation consisting of a series of one or more printing processes and including associated drying areas.

(33) Process drain -- Any opening (including a covered or controlled opening) which is installed or used to receive or convey wastewater into the wastewater system.

(34) Rupture disk -- A diaphragm held between flanges for the purpose of isolating a VOC from the atmosphere or from a downstream pressure relief valve.

(35) Shutdown or turnaround -- For the purposes of this chapter, a work practice or operational procedure that stops production from a unit or part of a unit during which time it is technically feasible to clear process material from a unit or part of a unit consistent with safety constraints, and repairs can be accomplished.

(A) The term shutdown or turnaround does not include a work practice that would:

(i) stop production from a unit or part of a unit for less than 24 hours; or

(ii) stop production from a unit or part of a unit for a shorter period of time than would be required to clear the unit or part of the unit and start up the unit.

(B) Operation of a unit or part of a unit in recycle mode (i.e., process material is circulated, but production does not occur) for less than 24 hours is not considered shutdown.

(36) Startup -- For the purposes of this chapter, the setting into operation of a piece of equipment or unit for the purpose of production or waste management.

(37) ~~[(25)]~~ Synthetic organic chemical manufacturing process -- A process that produces, as intermediates or final products, one or more of the chemicals listed in 40 Code of Federal Regulations §60.489 (October 17, 2000) [60.489 (effective October 18, 1983)].

(38) ~~[(26)]~~ Tank-truck tank -- Any storage tank having a capacity greater than 1,000 gallons, mounted on a tank-truck or trailer. Vacuum trucks used exclusively for maintenance and spill response are not considered to be tank-truck tanks.

(39) ~~[(27)]~~ Transport vessel -- Any land-based mode of transportation (truck or rail) that is equipped with a storage tank having a capacity greater than 1,000 gallons which is used to transport oil, gasoline, or other volatile organic liquid bulk cargo. Vacuum trucks used exclusively for maintenance and spill response are not considered to be transport vessels.

(40) ~~[(28)]~~ True partial pressure -- The absolute aggregate partial pressure (psia) of all VOC in a gas stream.

(41) ~~[(29)]~~ Vapor balance system -- A system which provides for containment of hydrocarbon vapors by returning displaced vapors from the receiving vessel back to the originating vessel.

(42) ~~[(30)]~~ Vapor control system or vapor recovery system -- Any control system which utilizes vapor collection equipment to route VOC to a control device that reduces VOC emissions.

(43) ~~[(31)]~~ Vapor-tight -- Not capable of allowing the passage of gases at the pressures encountered except where other acceptable leak-tight conditions are prescribed in this chapter.

(44) ~~[(32)]~~ Waxy, high pour point crude oil -- A crude oil with a pour point of 50 degrees Fahrenheit (10 degrees Celsius) or higher as determined by the American Society for Testing and Materials Standard D97-66, "Test for Pour Point of Petroleum Oils."

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

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Texas Natural Resource Conservation Commission

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For further information, please call: (512) 239-0348

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## SUBCHAPTER B. GENERAL VOLATILE ORGANIC COMPOUND SOURCES

### DIVISION 2. VENT GAS CONTROL

#### 30 TAC §§115.120 - 115.123, 115.126, 115.127, 115.129

#### STATUTORY AUTHORITY

The amendments are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendments are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed amendments implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

#### *§115.120. Vent Gas Definitions.*

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

(1) - (6) (No change.)

#### *§115.121. Emission Specifications.*

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

(1) - (3) (No change.)

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

(b) (No change.)

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

(1) - (4) (No change.)

§115.122. Control Requirements.

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following control requirements shall apply: [?]

(1) - (2) (No change.)

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

(A) Each bakery in the Houston/Galveston area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 25 tons per calendar year shall ensure that the overall emission reduction from the uncontrolled VOC emission rate of the oven(s) is [will be] at least 80% [by December 31, 2001].

(B) Each bakery in the Dallas/Fort Worth area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 50 tons per calendar year, shall ensure that the overall emission reduction from the uncontrolled VOC emission rate of the oven(s) is [will be] at least 80% [by December 31, 2000].

(C) - (E) (No change.)

(4) (No change.)

(b) - (c) (No change.)

§115.123. Alternate Control Requirements.

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

(1) (No change.)

(2) The owner or operator of a synthetic organic chemical manufacturing industry (SOCMI) reactor process or distillation operation in which vent gas stream emissions are controlled by a control device with a control efficiency of at least 90% which was installed before December 3, 1993 [prior to the effective date of the applicable paragraphs of this division (relating to Vent Gas Control)] may request an alternate reasonably available control technology (ARACT) determination. The executive director shall approve the ARACT if it is determined to be economically unreasonable to replace the control device with a new control device meeting the requirements of §115.122(a)(2) of this title (relating to Control Requirements) [the applicable rule(s)]. Each ARACT approved by the executive director shall include a requirement that the control device be operated at its maximum efficiency. Each ARACT shall only be valid until the control device undergoes a replacement, a modification as defined in 40 Code of Federal Regulations (CFR) §60.14 (October 17, 2000) [60.14], or a reconstruction as defined in 40 CFR §60.15 (December 16, 1975) [60.15], at

which time the replacement, modified, or reconstructed control device shall meet the requirements of §115.122(a)(2) of this title [the applicable rule(s)]. Any request for an ARACT determination shall be submitted to the executive director no later than May 31, 1994. The executive director may direct the holder of an ARACT to reapply for an [their] ARACT if it is more than ten [10] years since the date of installation of the control device and there is good cause to believe that it is now economically reasonable to meet the requirements of §115.122(a)(2) of this title [the applicable rule(s)]. Within three months of an executive director request, the holder of an ARACT shall reapply for an [their] ARACT. If the reapplication for an ARACT is denied, the holder of the ARACT shall meet the requirements of §115.122(a)(2) of this title [the applicable rule(s)] as soon as practicable, but no later than two years from the date of denial.

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

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

§115.126. Monitoring and Recordkeeping Requirements.

The owner or operator of any facility which emits volatile organic compounds (VOC) through a stationary vent in Aransas, Bexar, Calhoun, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties or in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas shall maintain the following information at the facility for at least five [two] years. The owner or operator shall make the information available upon request to representatives of the executive director, EPA, or any local air pollution control agency having jurisdiction in the area.

(1) - (7) (No change.)

§115.127. Exemptions.

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

(1) (No change.)

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

(A) - (B) (No change.)

[C] until April 15, 2001, for facilities which have been assigned the code number 26 as described in the document Standard Industrial Classification (SIC) Manual, 1972, as amended by the 1977 Supplement, a vent gas stream specified in §115.121(a)(1) of this title with a concentration of VOC less than 30,000 ppmv;]

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

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

(3) (No change.)

(4) For synthetic organic chemical manufacturing industry (SOCMI) reactor processes and distillation operations:

(A) - (C) (No change.)

(D) Any distillation operation vent gas stream which meets the requirements of 40 Code of Federal Regulations (CFR) §60.660(c)(4) [60.660(e)(4)] or §60.662(c) [60.662(e)] (concerning Subpart NNN--Standards of Performance for VOC Emissions From SOCOMI Distillation Operations, December 14, 2000 [effective June 29, 1990]) is exempt from the requirements of §115.121(a)(2)(A) of this title.

(E) Any reactor process vent gas stream which meets the requirements of 40 CFR §60.700(c)(2) [60.700(e)(2)] or §60.702(c) [60.702(e)] (concerning Subpart RRR--Standards of Performance for VOC Emissions From SOCOMI Reactor Processes, December 14, 2000 [effective November 27, 1995]) is exempt from the requirements of §115.121(a)(2)(A) of this title.

(5) (No change.)

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

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

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

(b) For all persons in Nueces and Victoria Counties, the following exemptions apply.

(1) - (2) (No change.)

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

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

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

(1) - (2) (No change.)

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

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

§115.129. *Counties and Compliance Schedules.*

(a) (No change.)

~~{(b) The owner or operator of each bakery in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall comply with §§115.121(a)(3), 115.122(a)(3), and 115.126(5) of this title (relating to Emission Specifications; Control Requirements; and Monitoring and Recordkeeping Requirements) as soon as practicable, but no later than December 31, 2001.}~~

~~{(c) The owner or operator of each bakery in Collin, Dallas, Denton, and Tarrant Counties subject to §115.122(a)(3)(B) of this title shall comply with §§115.121(a)(3), 115.122(a)(3), and 115.126(5) of this title as soon as practicable, but no later than December 31, 2000.}~~

~~(b) ~~{(d)}~~ The owner or operator of each bakery in Collin, Dallas, Denton, and Tarrant Counties subject to §115.122(a)(3)(C) of this title shall comply with §§115.121(a)(3), 115.122(a)(3)(C), and 115.126(6) of this title (relating to Emission Specifications; Control Requirements; and Monitoring and Recordkeeping Requirements) as soon as practicable, but no later than one year, after the commission publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the national ambient air quality standard (NAAQS) for ozone by the attainment deadline or failure to demonstrate reasonable further progress as set forth in the FCAA, §172(c)(9).~~

~~(c) ~~{(e)}~~ The owner or operator of each bakery in El Paso County subject to §115.122(a)(3)(D) of this title shall comply with §§115.121(a)(3), 115.122(a)(3)(D), and 115.126(6) of this title as soon as practicable, but no later than one year, after the commission publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the NAAQS for ozone by the attainment deadline or failure to demonstrate reasonable further progress as set forth in the FCAA, §172(c)(9).~~

~~{(f) The owner or operator of each flare in Brazoria, Chambers, Collin, Dallas, Denton, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties which is used to comply with the requirements of §115.121 and/or §115.122 of this title shall comply with §115.125(3)(C) and §115.126(1)(B) of this title (relating to Testing Requirements; and Monitoring and Recordkeeping Requirements) as soon as practicable, but no later than December 31, 2001.}~~

~~{(g) The owner or operator of each vent gas stream in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties shall comply with the recordkeeping requirements of §115.126(3) and (4) of this title as soon as practicable, but no later than December 31, 2001.}~~

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

Filed with the Office of the Secretary of State on June 7, 2002.



## DIVISION 4. INDUSTRIAL WASTEWATER

### 30 TAC §§115.142 - 115.144, 115.147, 115.149

#### STATUTORY AUTHORITY

The amendments are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendments are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed amendments implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

#### §115.142. Control Requirements.

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

wastewater stream to less than 1,000 parts per million by weight. For wastewater streams which are combined and then treated to remove VOC, the amount of VOC to be removed from the combined wastewater stream shall be at least the total amount of VOC that would be removed to treat each individual affected VOC wastewater stream so that they no longer meet the definition of affected VOC wastewater stream, except for properly operated biotreatment units which shall meet the requirements of paragraph (3) of this section. For this division, a component of a wastewater storage, handling, transfer, or treatment facility shall include, but is not limited to, wastewater storage tanks, surface impoundments, wastewater drains, junction boxes, lift stations, weirs, and oil-water separators.

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

(A) All components shall be fully covered or be equipped with water seal controls. For any component equipped with water seal controls, the use of VOC rather than water as the sealing liquid in a water seal is unacceptable. For any process drain not equipped with water seal controls, the process drain shall be equipped with a gasketed seal, or a tightly-fitting cap or plug.

(B) - (C) (No change.)

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

(i) (No change.)

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

(I) (No change.)

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

(-a-) (No change.)

(-b-) water seal controls which are installed and maintained at the wastewater entrance(s) to or exit from the junction box restricting ventilation in the individual drain system and between components in the individual drain system. [Upon request by the executive director, EPA, or any local program with jurisdiction, the owner or operator shall demonstrate (e.g., by visual inspection or smoke test) that the junction box water seal controls are properly designed and restrict ventilation.]

(E) - (G) (No change.)

(H) If any seal or cover connection is found to not be in proper condition, a first attempt at repair shall be made no later than five calendar days after the leak or improper condition is found. The [the] repair or correction shall be completed as soon as possible but no later than [within] 15 calendar days after [of] detection, unless the repair or correction is technically impossible without requiring a unit shutdown, in which case the repair or correction shall be made before the end of the next unit shutdown. The leak or improper condition is considered to be repaired when it is monitored with an instrument using Test Method 21 and shown to no longer have a leak after adjustments or alterations to the component.

(2) - (3) (No change.)

(4) Any wastewater component that becomes subject to this division by exceeding the provisions of §115.147 of this title (relating to Exemptions) or an affected VOC wastewater stream as defined in §115.140 of this title (relating to Industrial Wastewater Definitions)

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

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

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

§115.143. *Alternate Control Requirements.*

(a) - (b) (No change.)

(c) The owner or operator of an affected source category within a plant may elect to comply with the provisions of 40 Code of Federal Regulations 63, Subpart G (National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, January 22, 2001 [~~as in effect December 9, 1998~~]) as an alternative to complying with this division [~~(relating to Industrial Wastewater)~~], provided that:

(1) - (3) (No change.)

§115.144. *Inspection and Monitoring Requirements.*

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

(1) - (4) (No change.)

(5) All water seal controls shall be inspected daily to ensure that the water seal controls are effective in preventing ventilation. Upon request by the executive director, EPA, or any local program with jurisdiction, the owner or operator shall demonstrate (e.g., by visual inspection or smoke test) that the water seal controls are properly designed and restrict ventilation.

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

§115.147. *Exemptions.*

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

(1) - (2) (No change.)

(3) Unless specifically required by this division (relating to Industrial Wastewater), any component of a wastewater storage, handling, transfer, or treatment facility to which the control requirements of §115.142 of this title apply is exempt from the requirements of any other division of this chapter. This paragraph does not apply to components which are subject to the requirements of Subchapter D,

Division 3, and/or Subchapter H of this chapter (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas; and Highly-Reactive Volatile Organic Compounds).

(4) - (7) (No change.)

§115.149. *Counties and Compliance Schedules.*

(a) - (d) (No change.)

(e) The owner or operator of each affected source category within a plant in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties shall comply with the requirement in §115.142(1)(A) of this title for gasketed seals or tightly-fitting caps or plugs on process drains not equipped with water seal controls as soon as practicable, but no later than April 30, 2003.

(f) The owner or operator of each affected source category within a plant in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties shall comply with the requirement in §115.142(1)(H) of this title for a first attempt at repair within five calendar days and for follow-up monitoring as soon as practicable, but no later than April 30, 2003.

(g) The owner or operator of each affected source category within a plant in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties shall comply with the requirements in §115.144(5) and (6) of this title for daily water seal inspections and weekly inspections of process drains not equipped with water seals as soon as practicable, but no later than April 30, 2003.

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

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Stephanie Bergeron

Director, Environmental Law Division

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**DIVISION 6. BATCH PROCESSES**

**30 TAC §§115.160, 115.161, 115.166, 115.167**

**STATUTORY AUTHORITY**

The amendments are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendments are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of

emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed amendments implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

*§115.160. Batch Process Definitions.*

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

(1) - (12) (No change.)

~~[(13) Semi-continuous — Conduction of operations on a steady-state mode but only for finite durations (in excess of eight hours minimum) during the course of a year. For example, a steady-state distillation operation that functions for one month would be considered semi-continuous.]~~

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

(14) [(15)] Volatility -- As follows.

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

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

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

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

Figure: 30 TAC §115.160(14)(D)

*§115.161. Applicability.*

(a) - (b) (No change.)

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

*§115.166. Monitoring and Recordkeeping Requirements.*

The owner or operator of each batch process operation in the Beaumont/Port Arthur and Houston/ Galveston areas shall maintain the following information for at least five [~~two~~] years at the plant, as defined by its air quality account number. The owner or operator shall make the information available upon request to representatives of the executive director, EPA, or any local air pollution control agency having jurisdiction in the area:

(1) - (3) (No change.)

*§115.167. Exemptions.*

The following exemptions apply.

(1) Batch process operations at an account which has total volatile organic compound (VOC) emissions (determined before control but after the last recovery device) of less than the following rates from all stationary emission sources included in the account are exempt from the requirements of this division (relating to Batch Processes), except for §115.161(b) and (c) of this title (relating to Applicability):

(A) - (B) (No change.)

(2) The following are exempt from the requirements of this division, except for §§115.161(b) and (c), 115.164, and 115.166(2) and (3) [§115.164 and §115.166(2) and (3)] of this title (relating to Applicability; Determination of Emissions and Flow Rates; and Monitoring and Recordkeeping Requirements). [±]

(A) Combined vents from a batch process train which have the following [~~an~~] annual mass emissions total, [as follows:]  
Figure: 30 TAC §115.167(2)(A) (No change.)

(B) Single unit operations that have an annual mass emissions total of 500 pounds per year [~~lb/yr~~] or less.

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

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**DIVISION 7. FLARES**

**30 TAC §§115.170, 115.171, 115.173 - 115.176, 115.179**

**STATUTORY AUTHORITY**

The new sections are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The new sections are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of

emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed new sections implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

§115.170. Applicability and Flare Definitions.

(a) Applicability. Any flare in the Houston/Galveston area, as defined in §115.10 of this title (relating to Definitions), which emits, or has the potential to emit, a volatile organic compound (VOC), as defined in §115.10 of this title, is subject to the requirements of this division (relating to Flares) in addition to the applicable requirements of any other division in this chapter.

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

(1) Supplementary fuel -- Natural gas or fuel gas added to the gas stream to increase the net heating value to minimum require value.

(2) Pilot gas -- Gas that is used to ignite or continually ignite flare gas.

§115.171. Control Requirements.

All flares shall continuously comply with 40 Code of Federal Regulations §60.18 as amended through October 17, 2000 (65 FR 61744).

§115.173. Monitoring Requirements.

All persons with affected flares shall continuously monitor the mass flow rate of all volatile organic compounds routed to a flare. For demonstrating continuous compliance with the maximum flare exit velocity requirements of 40 Code of Federal Regulations (CFR) §60.18 as amended through October 17, 2000 (65 FR 61744), the owner or operator of a flare shall install, calibrate, and operate a continuous flow monitoring device on the main flare header (located after the knock-out pot and addition of any supplementary fuel) capable of measuring the flow rate over the full range of expected operation. The flow monitoring device shall meet the accuracy requirements of 40 CFR 60, Appendix A, Method 2D as amended through October 17, 2000 (65 FR 61744). For correcting flow rate to standard conditions (defined as 68 degrees Fahrenheit and 29.92 inches of mercury), temperature and pressure in the main flare header shall be monitored continuously with temperature and pressure gauges meeting the specifications of Method 2D. The flow monitoring device, temperature gauge, and pressure gauge shall be calibrated on an annual basis to meet the specifications of Method 2D.

§115.174. Reporting Requirements.

The owner or operator of each flare shall report, in writing, to the Technical Analysis Division within 30 days following the end of each calendar quarter the average-hourly emission rate of all speciated volatile organic compound in the flare header gas.

§115.175. Sampling Requirements.

The owner or operator of a flare shall take one sample every four hours from a location on the main flare header which is after both the knock-out pot and the location of the introduction of any supplementary fuel. The samples shall be analyzed according to the procedures in 40 Code of Federal Regulations (CFR) 60, Appendix A, Method 18 as amended through October 17, 2000 (65 FR 61744). Net heating value of the gas combusted in the flare shall be calculated according to the equation given in 40 CFR §60.18(f)(3) as amended through October 17, 2000 (65 FR 61744). The samples shall be used to demonstrate continual compliance with minimum net heating value requirements of 40 CFR §60.18 and speciated volatile organic compound concentrations in the flare header gas. Pilot gas shall not be included in the determination of the net heating value.

§115.176. Recordkeeping Requirements.

The owner or operator of a flare at an account that is subject to this division shall:

(1) maintain records of the total gas flow rate on a pounds-per-hour basis for each flare at an account that has volatile organic compounds (VOC) in the gas stream;

(2) maintain daily records of the net heating value of the gas stream routed to the flare and the exit velocity at the flare tip;

(3) maintain daily records of the speciated VOC concentration in the flare header gas;

(4) maintain records of all samples in accordance with the provisions of §115.175 of this title (relating to Sampling Requirements); and

(5) maintain all records requested in paragraphs (1) - (4) of this section for five years and make them available for review upon request by authorized representatives of the executive director, EPA, or any local air pollution control agency with jurisdiction.

§115.179. Counties and Compliance Schedules.

For all persons in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties, affected flares shall be in compliance with this division (relating to Flares) as soon as practicable, but no later than December 31, 2003. However, if a flare at an account has monitoring data that reflects any speciated volatile organic compound in the flare header, then the reporting requirements of this division are applicable and data must be submitted to the Technical Analysis Division no later than April 30, 2003.

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

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Stephanie Bergeron

Director, Environmental Law Division

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DIVISION 8. COOLING TOWER HEAT EXCHANGE SYSTEMS

30 TAC §§115.180, 115.182 - 115.184, 115.186, 115.189

## STATUTORY AUTHORITY

The new sections are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The new sections are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed new sections implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

### §115.180. Applicability and Cooling Tower Heat Exchange System Definitions.

(a) Applicability. Any cooling tower heat exchange system in the Houston/Galveston area, as defined in §115.10 of this title (relating to Definitions), which emits, or has the potential to emit, a volatile organic compound (VOC), as defined in §115.10 of this title, is subject to the requirements of this division (relating to Cooling Tower Heat Exchange Systems) in addition to the applicable requirements of any other division in this chapter.

(b) Definitions. The following terms, when used in this division, shall have the following meanings, unless the context clearly indicates otherwise. Additional definitions for terms used in this division are found in §3.2, 101.1, and 115.10 of this title (relating to Definitions). Cooling tower heat exchange system - Cooling towers, associated heat exchangers, pumps, and ancillary equipment where water is used as a cooling medium and the heat from process fluids is transferred to cooling water. This does not include fin-fan coolers. This also does not include comfort cooling tower heat exchange systems (i.e., those which are used exclusively in cooling, heating, ventilation, and air conditioning systems).

### §115.182. Monitoring Requirements.

The owner or operator of each cooling tower heat exchange system at an account that is subject to this division (relating to Cooling Tower Heat Exchange Systems) shall:

(1) install, calibrate, and operate continuous flow monitors on the inlet and outlet of each cooling tower;

(2) perform, at a minimum, sampling twice a week to determine the speciated concentration of all volatile organic compounds in the cooling water using one of the test methods in §115.184 of this title (relating to Testing Requirements) as appropriate; and

(3) submit for review and approval by the Engineering Services Team, a quality assurance plan for installation, calibration, operation, and maintenance for the monitor program. The plan shall be submitted prior to initiating a monitoring program to comply with the requirements of paragraphs (1) and (2) of this section. Additionally, the plan must define each compound which could potentially leak through the heat exchanger, and therefore directly impact the emissions of cooling water system.

### §115.183. Reporting Requirements.

The owner or operator of a cooling tower heat exchange system shall report the following, in writing, to the Technical Analysis Division within 30 days following the end of each calendar quarter:

(1) the average-hourly speciated volatile organic compound emission rate; and

(2) the total amount of chlorine introduced into each cooling tower heat exchange system on an hourly basis.

### §115.184. Testing Requirements.

Compliance with this division (relating to Cooling Tower Heat Exchange Systems) shall be determined by applying the following test method as appropriate.

(1) For determining the concentration of volatile organic compound (VOC) in cooling water where any of the VOCs in any portion of a process stream contacting a heat exchanger have normal boiling points equal to or less than 140 degrees Fahrenheit, the sampling method shall be the air-stripping method for cooling towers. The samples obtained from the air-stripping method shall be collected in a summa canister that is under a vacuum and prior to the addition of any drying agent. In addition, the summa canister shall be equipped with a critical orifice or needle valve precalibrated to flow at not more than 500 cubic centimeters per minute. The samples shall be analyzed according to the procedures in Test Method 18, 40 Code of Federal Regulations (CFR) 60, Appendix A, and/or Method TO-14A, published in "U.S. EPA Compendium for Determination of Toxic Organic Compounds in Ambient Air," EPA Document Number 625/R96/010B. The minimum detection limit of the testing system shall be no more than ten parts per billion by weight (ppbw) in the water.

(2) For determining VOC concentration in cooling water where the heat exchange system or subsystem in which any VOC in the associated process(es) has a normal boiling point greater than 140 degrees Fahrenheit, direct water analysis may be used in lieu of the air-stripping method in paragraph (1) of this section. Samples for direct water analysis must be collected in volatile organic analysis vials following the procedures in 40 CFR §61.355(c)(3)(ii)(A) - (H) (excluding the static mixer requirement). The samples shall be prepared according to SW-846 Method 5030B and analyzed using SW-846, Test Method 8260B, with all tentatively identified compounds included in the analysis. The minimum detection limit of the testing system shall be no more than ten ppbw in the water.

(3) Modifications to these test methods or alternative test methods may be approved by the executive director.

### §115.186. Recordkeeping Requirements.

The owner or operator of any cooling tower heat exchange system at an account that is subject to this division (relating to Cooling Tower Heat Exchange Systems) shall:

(1) establish and maintain a process diagram of the cooling tower heat exchange system, including the points at which the system will be monitored and sampled such that the cooling water is not exposed to the atmosphere prior to sampling;

(2) maintain records that document the continuous flow rate for each cooling tower heat exchange system;

(3) maintain records on a weekly basis that document the speciated concentration of all volatile organic compounds in the process fluid for each cooling tower heat exchange system;

(4) maintain records of all tests in accordance with the provisions of §115.184 of this title (relating to Testing Requirements), as well as records of in-house testing;

(5) for cooling tower heat exchange systems that introduce chlorine into the circulated water, records shall be maintained on a daily basis that document the amount of chlorine introduced to the cooling tower heat exchange system on an hourly basis; and

(6) maintain all records for five years and make available for review upon request by authorized representatives of the executive director, EPA, or any local air pollution control agency with jurisdiction.

§115.189. Counties and Compliance Schedules.

The owner or operator of each cooling tower heat exchange system in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall demonstrate compliance with the requirements of this division (relating to Cooling Tower Heat Exchange Systems) as soon as practicable, but no later than December 31, 2003. However, if a cooling tower heat exchange system at an account has data that reflects chlorine usage amounts and/or monitoring data for any speciated volatile organic compound, then the reporting requirements of this division are applicable and data must be submitted to the Technical Analysis Division no later than April 30, 2003.

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

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**SUBCHAPTER C. VOLATILE ORGANIC  
COMPOUND TRANSFER OPERATIONS  
DIVISION 1. LOADING AND UNLOADING  
OF VOLATILE ORGANIC COMPOUNDS**

**30 TAC §§115.211, 115.215, 115.219**

**STATUTORY AUTHORITY**

The amendments are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendments are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general,

comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed amendments implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

*§115.211. Emission Specifications.*

The owner or operator of each gasoline terminal in the covered attainment counties and in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, as defined in §115.10 of this title (relating to Definitions), shall ensure that volatile organic compound (VOC) emissions from the vapor control system vent at gasoline terminals do not exceed the following rates:

(1) (No change.)

(2) in the covered attainment counties, 0.17 pound per 1,000 gallons (20 mg/liter) of gasoline loaded into transport vessels. [Until April 30, 2000 in Gregg, Nueces, and Victoria Counties, VOC emissions are limited to 0.67 pound per 1,000 gallons (80 mg/liter) of gasoline loaded into transport vessels.]

*§115.215. Approved Test Methods.*

Compliance with the emission specifications, vapor control system efficiency, and certain control requirements, inspection requirements, and exemption criteria of §§115.211 - 115.214 and 115.217 of this title (relating to Loading and Unloading of Volatile Organic Compounds) shall be determined by applying one or more of the following test methods and procedures, as appropriate.

(1) - (2) (No change.)

(3) Performance requirements for flares and vapor combustors.

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

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

(C) Compliance with the requirements of 40 CFR §60.18(b) [60.18(b)] will be considered to demonstrate compliance with the emission specifications and control efficiency requirements of §115.211 and §115.212 of this title (relating to Emission Specifications; and Control Requirements).

(4) - (5) (No change.)

(6) Gasoline terminal test procedures. Use the additional test procedures described in 40 CFR §60.503(b) - (d) (February 14, 1989) [60.503 b, c, and d], for pre-test leak determination, emission specifications test for vapor control systems, and pressure limit in transport vessel [, respectively].

(7) Vapor-tightness test procedures for marine vessels. Use 40 CFR §63.565(c) [63.565(e)] ([effective] September 19, 1995) or 40 CFR §61.304(f) [61.304(f)] (October 17, 2000 [effective April 3, 1990]) for determination of marine vessel vapor tightness.

(8) - (9) (No change.)

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

*§115.219. Counties and Compliance Schedules.*

(a) (No change.)

(b) The owner or operator of each gasoline bulk plant in the covered attainment counties, as defined in §115.10 of this title (relating to Definitions), shall continue to comply with this division as required by §115.930 of this title [§§115.212(b), 115.214(b), 115.216, and 115.217(b) of this title (relating to Control Requirements; Inspection Requirements; Monitoring and Recordkeeping Requirements; and Exemptions) as soon as practicable, but no later than April 30, 2000].

(c) The owner or operator of each gasoline terminal in the covered attainment counties, as defined in §115.10 of this title [~~excluding Gregg, Nueces, and Victoria Counties~~], shall continue to comply with this division as required by §115.930 of this title [§§115.211(2), 115.212(b), 115.214(b), 115.216, and 115.217(b) of this title as soon as practicable, but no later than April 30, 2000].

~~[(d) The owner or operator of each gasoline terminal in Gregg, Nueces, and Victoria Counties shall:]~~

~~[(1) continue to comply with the vapor control requirements specified in §115.212(b)(4)(A) and (B) of this title; and]~~

~~[(2) be in compliance with the following specifications as soon as practicable, but no later than April 30, 2000:]~~

~~[(A) the 20 mg/liter emission specification of §115.211(2) of this title;]~~

~~[(B) the loading lockout requirements of §115.212(b)(4)(C) of this title;]~~

~~[(C) the gasoline tank-truck leak testing requirements of §115.214(b)(1)(C) of this title; and]~~

~~[(D) the monthly leak inspection requirements of §115.214(b)(2) of this title.]~~

(e) The owner or operator of each gasoline terminal in Hardin, Jefferson, and Orange Counties shall comply with the loading lockout requirements of §115.212(a)(4)(C) of this title and the monthly leak inspection requirements of §115.214(a)(2) and §115.216(3)(E) of this title as soon as practicable, but no later than April 30, 2000.]

(f) The owner or operator of each land-based VOC loading operation (excluding gasoline terminals and gasoline bulk plants) in Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties shall comply with the 90% control efficiency requirement of §115.212(b)(1)(A) of this title as soon as practicable, but no later than April 30, 2000.]

(g) The owner or operator of each land-based VOC loading operation (excluding gasoline terminals and gasoline bulk plants) in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties shall comply with the recordkeeping requirements of §115.216 of this title as soon as practicable, but no later than April 30, 2000.]

~~[(h) The owner or operator of each flare used to comply with the requirements of §115.211 and/or §115.212 of this title (relating to Emission Specifications; and Control Requirements) shall comply with §115.215(3) of this title as soon as practicable, but no later than April 30, 2000.]~~

(d) ~~[(i) The owner or operator of each marine terminal in Hardin, Jefferson, and Orange Counties shall comply with this division [§§115.212(a)(6), 115.214(a)(3), 115.215, 115.216, and 115.217 of this title] as soon as practicable but no later than three years after the earliest of the following occurs:~~

(1) the commission publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the national ambient air quality standard for ozone by the attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the Federal Clean Air Act, §172(c)(9);

(2) the EPA publishes notification in the *Federal Register* of its determination to deny the petition to redesignate the Beaumont/Port Arthur ozone nonattainment area as an ozone attainment area; or

(3) the EPA publishes notification in the *Federal Register* of its determination to deny approval of the demonstration of attainment for the Beaumont/Port Arthur ozone nonattainment area based upon Urban Airshed Model modeling.

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

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Stephanie Bergeron

Director, Environmental Law Division

Texas Natural Resource Conservation Commission

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For further information, please call: (512) 239-0348

◆ ◆ ◆  
DIVISION 2. FILLING OF GASOLINE STORAGE VESSELS (STAGE I) FOR MOTOR VEHICLE FUEL DISPENSING FACILITIES

**30 TAC §115.229**

STATUTORY AUTHORITY

The amendment is proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendment is also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any

research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed amendment implements TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

§115.229. *Counties and Compliance Schedules.*

(a) The owner or operator of each motor vehicle fuel dispensing facility in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties [All affected persons in Chambers, Collin, Denton, Fort Bend, Hardin, Jefferson, Liberty, Montgomery, Orange, and Waller Counties] shall continue to comply with this division (relating to Filling of Gasoline Storage Vessels (Stage I) for Motor Vehicle Fuel Dispensing Facilities) as required by §115.930 of this title (relating to Compliance Dates) [soon as practicable, but no later than the installation of a Stage II vapor recovery system as required by §§115.241-115.249 of this title (relating to Control of Vehicle Refueling Emissions (Stage II) at Motor Vehicle Fuel Dispensing Facilities) or January 31, 1994, whichever occurs first].

(b) The owner or operator of each motor vehicle fuel dispensing facility in the covered attainment counties, as defined in §115.10 of this title (relating to Definitions), [Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties which has dispensed more than 10,000 gallons of gasoline in any calendar month after January 1, 1991, but less than 120,000 gallons of gasoline per year, and for which construction began prior to November 15, 1992] shall continue to comply with this division as required by §115.930 of this title [(relating to Filling of Gasoline Storage Vessels (Stage I) for Motor Vehicle Fuel Dispensing Facilities) as soon as practicable, but no later than the installation of a Stage II vapor recovery system as required by §§115.241 - 115.249 of this title or January 31, 1994, whichever occurs first].

[(c) The owner or operator of each motor vehicle fuel dispensing facility in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties affected by §115.222(1) of this title (relating to Control Requirements), regarding the prohibition of any obstruction in the submerged fill pipe, shall comply with the prohibition on submerged fill pipe obstructions as soon as practicable, but no later than:]

[(1) the time of Stage II vapor recovery system installation for any facility at which the Stage II installation occurred after November 15, 1993; and]

[(2) November 15, 1994 for any facility which has installed Stage II controls as of November 15, 1993.]

[(d) The owner or operator of each motor vehicle fuel dispensing facility in the covered attainment counties, as defined in §115.10 of this title (relating to Definitions), which dispenses 125,000 gallons of gasoline or more in any calendar month after January 1, 1999 shall comply with this division (relating to Filling of Gasoline Storage Vessels

(Stage I) for Motor Vehicle Fuel Dispensing Facilities) as soon as practicable, but no later than April 30, 2000. The phrase "as soon as practicable, but no later than..." means that before the April 30, 2000 compliance date, motor vehicle fuel dispensing facilities which are equipped for Stage I vapor recovery must utilize Stage I for each gasoline delivery by a gasoline tank-truck which is likewise equipped for Stage I vapor recovery.]

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

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Stephanie Bergeron

Director, Environmental Law Division

Texas Natural Resource Conservation Commission

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For further information, please call: (512) 239-0348

◆ ◆ ◆  
DIVISION 3. CONTROL OF VOLATILE  
ORGANIC COMPOUND LEAKS FROM  
TRANSPORT VESSELS

30 TAC §115.239

STATUTORY AUTHORITY

The amendment is proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendment is also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed amendment implements TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

§115.239. *Counties and Compliance Schedules.*

(a) The owner or operator of each tank-truck tank in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties shall continue to comply with this division (relating

to Control of Volatile Organic Compound Leaks from Transport Vessels) [§§115.234, 115.235, 115.236, and 115.237 of this title (relating to Inspection Requirements, Approved Test Methods, Recordkeeping Requirements, and Exemptions)] as required by §115.930 of this title (relating to Compliance Dates).

(b) The owner or operator of each gasoline tank-truck tank in the covered attainment counties, as defined in §115.10 of this title (relating to Definitions), shall continue to comply with this division as required by §115.930 of this title [§§115.234, 115.235, 115.236, and 115.237 of this title as soon as practicable, but no later than April 30, 2000. The phrase "as soon as practicable, but no later than..." means that before the April 30, 2000 compliance date, gasoline tank-trucks which are equipped for Stage I vapor recovery must utilize Stage I for each gasoline delivery at a motor vehicle fuel dispensing facility which is likewise equipped for Stage I vapor recovery].

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

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## SUBCHAPTER D. PETROLEUM REFINING, NATURAL GAS PROCESSING, AND PETROCHEMICAL PROCESSES

### DIVISION 1. PROCESS UNIT TURNAROUND AND VACUUM-PRODUCING SYSTEMS IN PETROLEUM REFINERIES

#### 30 TAC §115.312

##### STATUTORY AUTHORITY

The amendment is proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendment is also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed amendment implements TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

#### §115.312. Control Requirements.

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

(1) Volatile organic compound (VOC) emissions from petroleum refineries shall be controlled during process unit shutdown or turnaround with the following procedure:

(A) (No change.)

(B) reduce vessel gas pressure to 5.0 pounds per square inch gauge (psig) [psig] (34.5 kPa gauge) or less by recovery or combustion before venting to the atmosphere.

(2) (No change.)

(3) In the Houston/Galveston area, the following are subject to the requirements of Subchapter H of this chapter (relating to Highly-Reactive Volatile Organic Compounds) in addition to the applicable requirements of this division (relating to Process Unit Turnaround and Vacuum-Producing Systems in Petroleum Refineries):

(A) any vent gas stream which is subject to §115.311(a) of this title and which includes a highly-reactive VOC, as defined in §115.10 of this title; and

(B) any process unit shutdown or turnaround of a unit in which a highly-reactive VOC is a raw material, intermediate, final product, or in a waste stream.

(b) (No change.)

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

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Stephanie Bergeron

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## DIVISION 2. FUGITIVE EMISSION CONTROL IN PETROLEUM REFINERIES IN GREGG, NUECES, AND VICTORIA COUNTIES

#### 30 TAC §115.326

##### STATUTORY AUTHORITY

The amendment is proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendment is also proposed under TCAA, §382.011, concerning General Powers and Duties,

which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed amendment implements TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

§115.326. *Recordkeeping Requirements.*

For Gregg, Nueces, and Victoria Counties, the owner or operator of a petroleum refinery shall have the following recordkeeping requirements.

(1) (No change.)

(2) Maintain a leaking-components monitoring log for all leaks of more than 10,000 parts per million by volume (ppmv) of volatile organic compound (VOC) detected by the monitoring program required by §115.324 of this title (relating to Inspection Requirements). This log shall contain, at a minimum, the following data:

(A)-(F) (No change.)

(G) if a component is found leaking:

(i)-(iv) (No change.)

(v) those leaks that cannot be repaired until turn-around and the date on which the leaking component is placed on the shutdown list;

(H)-(I) (No change.)

(3) (No change.)

(4) Maintain all monitoring records for at least five [~~two~~] years and make them available for review upon request by authorized representatives of the executive director, EPA, or local air pollution control agencies with jurisdiction.

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

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Stephanie Bergeron

Director, Environmental Law Division

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### DIVISION 3. FUGITIVE EMISSION CONTROL IN PETROLEUM REFINING, NATURAL GAS/GASOLINE PROCESSING, AND PETROCHEMICAL PROCESSES IN OZONE NONATTAINMENT AREAS

**30 TAC §§115.352, 115.354, 115.356, 115.357, 115.359**

#### STATUTORY AUTHORITY

The amendments are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendments are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed amendments implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

#### §115.352. *Control Requirements.*

For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), no person shall operate a petroleum refinery; a synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing process; or a natural gas/gasoline processing operation, as defined in §115.10 of this title, without complying with the following requirements.

(1) Except as provided in paragraph (2) of this section, no component shall be allowed to have a volatile organic compound (VOC) leak for more than 15 calendar days after the leak is found which exceeds the following:

(A) a VOC concentration greater than 500 parts per million by volume (ppmv) above background as methane, propane, or hexane, or the dripping or exuding of process fluid based on sight, smell, or sound for all components except pump seals and compressor seals; and

(B) (No change.)

(2) A first attempt at repair shall be made no later than five calendar days after the leak is found and the component shall be repaired no later than 15 calendar days after the leak is found, except as provided in subparagraphs (A) - (C) of this paragraph [unless the repair of the component would require a unit shutdown which would

create more emissions than the repair would eliminate]. A component in gas/vapor or light liquid service is considered to be repaired when it is monitored with an instrument using Test Method 21 and shown to no longer have a leak after adjustments or alterations to the component. A component in heavy liquid service is considered to be repaired when it is monitored by audio, visual, and olfactory means and shown to no longer have a leak after adjustments or alterations to the component.

(A) If the repair of a component would require a unit shutdown which would create more emissions than the repair would eliminate, the repair may be delayed until the next shutdown, provided that:

(i) within 30 days after the leak is detected, the owner or operator submits documentation to the Office of Compliance and Enforcement (Engineering Services Team), the appropriate regional office, and any local air pollution control agency having jurisdiction which includes a calculation of:

(I) the mass emissions resulting from shutdown of the unit, including the basis for the calculation and all assumptions made;

(II) the mass emissions from each leaking component in the unit as determined by using the methods in the EPA guidance document "Protocol for Equipment Leak Emission Estimates," Chapter 4, Mass Emission Sampling, (EPA-453/R-95-017, November, 1995);

(III) the cumulative mass emissions from each leaking component from the time that the leak began until the next scheduled shutdown. The leak shall be assumed to begin the day after the monitoring of the component immediately preceding the monitoring which resulted in detection of the leak. For example, if a component was monitored on February 22nd and May 5th of a given year and found to be leaking on May 5th, the component is assumed to have begun leaking on February 23rd; and

(IV) the total cumulative mass emissions in the unit from the calculations made in subclause (III) of this clause for leaking components in the unit;

(ii) the total cumulative mass emissions from leaking components in the unit as determined in subclause (IV) of this clause are less than 50% of the mass emissions resulting from shutdown of the unit as determined in subclause (IV) of this clause; and

(iii) the manager of the Engineering Services Team has issued an approval of the demonstration in clause (i)(III) of this subparagraph:

(I) once the approval is issued, all representations of the date of the next shutdown become enforceable conditions, except as provided in subclause (II) of this clause. For example, when the owner or operator represents that the next scheduled shutdown will occur on a particular date and bases the calculations in clause (i)(III) of this subparagraph on that representation, then continued operation of the unit past the represented date is not allowed unless repairs have been made to all leaking components in the unit which return them to non-leaking status;

(II) the owner or operator may submit a request for an extension of the shutdown date to the Office of Compliance and Enforcement (Engineering Services Team), the appropriate regional office, and any local air pollution control agency having jurisdiction. The request must be submitted at least 30 days before the shutdown date represented in the initial request. The owner or operator must include a projection of the date when emissions from the leaking components will equal 50% of those of the shutdown by using the methodology of

clause (i) of this subparagraph. Only one extension may be granted for a unit, and the extension will require the shutdown to occur no later than the projected date when emissions from the leaking components will equal 50% of the shutdown emissions; and

(III) if the manager of the Engineering Services Team has issued a disapproval of the demonstration in clause (i)(III) of this subparagraph, then the unit shall be shut down within 30 days of the disapproval.

(B) Except as provided in subparagraph (C) of this paragraph, each component for which repair has been delayed must be repaired or replaced at the next unit shutdown.

(C) Delay of repair beyond a unit shutdown will be allowed for a component if that component is isolated from the process and does not remain in VOC service.

(D) Valves which can be repaired without purging and/or cleaning the line may not be placed on the shutdown list.

(E) All components that have been opened or repaired during a shutdown shall be monitored (with a hydrocarbon gas analyzer) and inspected for leaks within seven days after startup is completed following the shutdown.

(F) All components on the shutdown list must continue to be monitored in accordance with §115.354 of this title (relating to Inspection Requirements).

(3) (No change.)

(4) Except for pressure relief valves, no valves shall be installed or operated at the end of a pipe or line containing VOC unless the pipe or line is sealed with a second valve, a blind flange, or a tightly-fitting plug [-] or [a] cap. The sealing device may be removed only while a sample is being taken or during maintenance operations, and when closing the line, the upstream valve shall be closed first.

(5)-(7) (No change.)

(8) New and reworked piping connections shall be welded, [ø] flanged, or consist of metal-to-metal seals. Screwed connections are permissible only on new piping smaller than two inches in diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas tested or hydraulically tested at no less than normal operating pressure and adjustments made, as necessary, to obtain leak-free performance.

(9) For valves equipped with rupture disks [disks], a pressure gauge or an equivalent device or system shall be installed between the relief valve and rupture disk [disk] to monitor disk [disk] integrity. All leaking disks [disks] shall be replaced at the earliest opportunity, but no later than the next process shutdown. Equivalent devices or systems shall be identified in a list to be made available upon request and must have been approved by the methods required by §115.353 of this title (relating to Alternate Control Requirements).

(10) Any petroleum refinery; synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing process; or natural gas/gasoline processing operation in the Houston/Galveston area in which a highly-reactive VOC, as defined in §115.10 of this title, is a raw material, intermediate, final product, or in a waste stream is subject to the requirements of Subchapter H of this chapter (relating to Highly- Reactive Volatile Organic Compounds) in addition to the applicable requirements of this division (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas).

§115.354. Inspection Requirements.

All affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas shall conduct a monitoring program consistent with the following provisions.

(1)-(8) (No change.)

(9) All component monitoring shall occur when the component is in contact with process material and the unit is in service. A unit that is not operating but still has process fluid in the line(s) is considered to be in service and is required to be monitored. For purposes of this chapter (relating to Control of Air Pollution from Volatile Organic Compounds), monitoring is not allowed at any unit that is shut down and cleared of process material, and any such monitoring is completely independent of any monitoring required by this chapter. For the purposes of this paragraph, "cleared of process material" does not mean that the unit has been cleaned and degassed.

(10) Except as provided in subparagraph (B) of this paragraph, the owner or operator shall use dataloggers and/or electronic data collection devices during all monitoring required by this section. The owner or operator shall use best efforts to transfer, on a daily basis, electronic data from electronic datalogging devices to the electronic database required by §115.356(1) of this title (relating to Monitoring and Recordkeeping Requirements).

(A) For all monitoring events in which an electronic data collection device is used, the collected monitoring data shall include a time and date stamp, an operator identification, and an instrument identification. If the collected monitoring data indicates that the technician recorded data at a faster rate than monitoring in accordance with Test Method 21 could have been conducted, then all of that data is considered invalid.

(B) The owner or operator may use paper logs where necessary or more feasible (e.g., small rounds, re-monitoring following component repair, or when dataloggers are broken or not available), and shall record, at a minimum, the identification of the technician conducting the monitoring, the date, the identification of the monitoring equipment, and the identification of the component being monitored. For audio, visual, and olfactory inspections, the owner or operator shall record, at a minimum, the identification of the person conducting the inspection, the date, and the area that was inspected. The owner or operator shall transfer any manually recorded monitoring data to the electronic database required by §115.356(1) of this title within seven days of monitoring.

(C) Once the electronic data from electronic datalogging devices have been transferred to the electronic database, changes to the data are not allowed. If there are discrepancies between the data in the electronic database required by §115.356(1) of this title and the data in the datalogger and/or field notes of subparagraphs (A) and (B) of this paragraph, respectively, then all of that data is considered invalid.

(11) For the hydrocarbon gas analyzer being used to monitor components for leaks, if the relative response factor multiplier of volatile organic compounds (VOC) expected to be emitted from a component is greater than 1.0, then that response factor should be used to correct measured concentrations to determine if a leak is occurring.

(12) Monitored VOC concentrations must be recorded for each component. Notations such as "pegged," "off scale," "leaking," "not leaking," or "below leak definition" may not be substituted for hydrocarbon gas analyzer results. For readings that are higher than the upper end of the scale (i.e., pegged) even when using the highest scale setting or a dilution probe, record a default pegged value of 500,000 parts per million by volume.

(13) All exemptions for valves with a nominal size of two inches or less expired on July 31, 1992 (final compliance date).

§115.356. Monitoring and Recordkeeping Requirements.

All affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas shall have the following recordkeeping requirements:

(1) maintain a components monitoring log which shall contain, at a minimum, the following data:

(A)-(D) (No change.)

(E) the results of:

(i) the monitoring (in parts per million by volume); and

(ii) the weekly audio, visual, and olfactory inspections of flanges, including, at a minimum, the identification of the person conducting the inspection and the area that was inspected;

(F) a record of the calibration of the monitoring instrument (including the calibration gas values and the instrument reading);

(G) if a component is found leaking:

(i)-(iv) (No change.)

(v) those leaks that cannot be repaired until a unit shutdown and the date on which the leaking component is placed on the shutdown list;

(H)-(I) (No change.)

(2) maintain records of the audio, visual, ~~audible,~~ and olfactory inspections of connectors other than flanges, but only if ~~are not required unless~~ a leak is detected; ~~and~~

(3) maintain and update at least once every 12 months a written or electronic database which contains, at a minimum, the following information for all components subject to this division (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas) (i.e., a master components list):

(A) the name of the unit where the component is located;

(B) the type of monitored component (e.g., valve or pump seal);

(C) the component identification code;

(D) type of service (gas/vapor; heavy liquid; or light liquid);

(E) the response factor for the material that the component contacts;

(F) if exempt, the specific rule citation under which the exemption is claimed; and

(G) for each valve which is classified as nonaccessible or unsafe to monitor, the reason(s) why the valve is so classified; and

(4) ~~{3}~~ maintain all monitoring records for at least five ~~two~~ years and make them available for review upon request by authorized representatives of the executive director, EPA, or local air pollution control agencies with jurisdiction.

§115.357. Exemptions.

For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/ Galveston areas, the following exemptions shall apply.

(1) (No change.)

(2) Conservation vents or other devices on atmospheric storage tanks that are actuated either by a vacuum or a pressure of no more than 2.5 pounds per square inch gauge (psig) [Storage tank valves], pressure relief valves equipped with a rupture disk [disc] or venting to a control device, components in continuous vacuum service, and valves that are not externally regulated (such as in-line check valves) are exempt from [all] the requirements of this division (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas), except that each pressure relief valve equipped with a rupture disk shall comply with §115.352(9) of this title (relating to Control Requirements).

(3)-(4) (No change.)

(5) Reciprocating compressors and positive displacement pumps used in natural gas/gasoline processing operations are exempt from the requirements of this division.

(6)-(8) (No change.)

(9) Valves rated greater than 10,000 psig [pounds per square inch gauge (psig)] are exempt from the requirements of §115.352(4) of this title.

(10) In the Houston/Galveston area, the requirements of Subchapter H of this chapter (relating to Highly-Reactive Volatile Organic Compounds) apply to components which qualify for one or more of the exemptions in paragraphs (1) - (9) of this section at any petroleum refinery; synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing process; or natural gas/gasoline processing operation in which a highly-reactive VOC, as defined in §115.10 of this title (relating to Definitions), is a raw material, intermediate, final product, or in a waste stream.

§115.359. *Counties and Compliance Schedules.*

The owner or operator of each affected source [All affected persons] in Brazoria, Chambers, Collin, El Paso, Dallas, Denton, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties shall:

(1) continue to comply with this division (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas) as required by §115.930 of this title (relating to Compliance Dates); [-]

(2) comply with §115.356(1)(E) of this title (relating to Monitoring and Recordkeeping Requirements) as soon as practicable, but no later than April 30, 2003;

(3) develop and make available upon request to the appropriate regional office, EPA, and any local air pollution control agency having jurisdiction the initial master components list required by §115.356(4) of this title as soon as practicable, but no later than April 30, 2003; and

(4) begin adjusting the measured volatile organic compound (VOC) concentration using the appropriate relative response factor as required by §115.354(11) of this title (relating to Inspection Requirements) as soon as practicable, but no later than December 31, 2003.

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

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For further information, please call: (512) 239-0348



## SUBCHAPTER E. SOLVENT-USING PROCESSES

### DIVISION 2. SURFACE COATING PROCESSES

#### 30 TAC §§115.420, 115.421, 115.427, 115.429

#### STATUTORY AUTHORITY

The amendments are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendments are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed amendments implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

#### §115.420. *Surface Coating Definitions.*

(a) General surface coating definitions. The following terms, when used in this division (relating to Surface Coating Processes), shall have the following meanings, unless the context clearly indicates otherwise. Additional definitions for terms used in this division are found in §§3.2, 101.1, and 115.10 [§115.10 of this title (relating to Definitions); §101.1 of this title (relating to Definitions); and §3.2] of this title (relating to Definitions).

(1)-(13) (No change.)

(b) Specific surface coating definitions. The following terms, when used in this division [(relating to Surface Coating Processes)], shall have the following meanings, unless the context clearly indicates otherwise.

(1)-(11) (No change.)

(12) Vehicle coating.

(A) (No change.)

(B) Vehicle refinishing (body shops).

(i) Basecoat/clearcoat system--A topcoat system composed of a pigmented basecoat portion and a transparent clearcoat portion. The VOC content of a basecoat (bc)/clearcoat (cc) system shall be calculated according to the following formula. [-] Figure: 30 TAC §115.420(b)(12)(B)(i) (No change.)

(ii)-(vii) (No change.)

(viii) Vehicle refinishing (body shops)--The coating of motor vehicles, as defined in §114.620 of this title (relating to Definitions), including, but not limited to, motorcycles, passenger cars, vans, light-duty trucks, medium-duty trucks, heavy-duty trucks, buses, and other vehicle body parts, bodies, and cabs by an operation other than the original manufacturer. The coating of non-road vehicles and non-road equipment, as these terms are defined in §114.3 and §114.6 of this title (relating to Low Emission Vehicle Fleet Definitions; and Low Emission Fuel Definitions), and trailers [~~and construction equipment~~] is not included.

(ix) (No change.)

(13)-(14) (No change.)

§115.421. *Emission Specifications.*

(a) No person in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions) may cause, suffer, allow, or permit volatile organic compound (VOC) emissions from the surface coating processes affected by paragraphs (1) - (15) of this subsection to exceed the specified emission limits. These limitations are based on the daily weighted average of all coatings delivered to each coating line, except for those in paragraph (10) of this subsection which are based on paneling surface area, and those in paragraph (14) of this subsection which, if using an averaging approach, must use one of the daily averaging equations within that paragraph. The owner or operator of a surface coating operation subject to paragraph (11) of the subsection may choose to comply by using the monthly weighted average option as defined in §115.420(b)(1)(XX) of this title (relating to Surface Coating Definitions).

(1)-(8) (No change.)

(9) Miscellaneous metal parts and products (MMPP) coating.

(A) VOC emissions from the coating of MMPP shall not exceed the following limits for each surface coating type:

(i)-(ii) (No change.)

(iii) 3.5 pounds per gallon (0.42 kg/liter) of coating (minus water and exempt solvent) delivered to the application system as an extreme performance coating, including chemical milling maskants; and

(iv) 3.0 pounds per gallon (0.36 kg/liter) of coating (minus water and exempt solvent) delivered to the application system for all other coating applications, including high-bake coatings, that pertain to MMPP. [-; and]

~~{(v) until December 31, 2001, 3.5 pounds per gallon (0.42 kg/liter) of coating (minus water and exempt solvent) delivered to the application system as a prime coat for the exterior of aircraft.}~~

(B)-(C) (No change.)

(10)-(11) (No change.)

(12) Surface coating of mirror backing.

(A) VOC emissions from the coating of mirror backing shall not exceed the following limits for each surface coating application method:

(i) 4.2 pounds per gallon (0.50 kg/liter) of coating (minus water and exempt solvent) delivered to a curtain coating application system; and

(ii) (No change.)

(B) (No change.)

(13) (No change.)

(14) Surface coating at wood furniture manufacturing facilities. The following requirements apply to wood furniture manufacturing facilities in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas. For facilities which are subject to this paragraph, adhesives are not considered to be coatings or finishing materials.

(A) VOC emissions from finishing operations shall be limited by:

(i) using [~~Using~~] topcoats with a VOC content no greater than 0.8 kilograms of VOC per kilogram of solids (0.8 pounds of VOC per pound of solids), as delivered to the application system; or

(ii) using [~~Using~~] a finishing system of sealers with a VOC content no greater than 1.9 kilograms of VOC per kilogram of solids (1.9 pounds of VOC per pound of solids), as applied, and topcoats with a VOC content no greater than 1.8 kilograms of VOC per kilogram of solids (1.8 pounds of VOC per pound of solids), as delivered to the application system; or

(iii) for [~~For~~] wood furniture manufacturing facilities using acid-cured alkyd amino vinyl sealers or acid-cured alkyd amino conversion varnish topcoats, using sealers and topcoats which meet the following criteria: [-]

(I) if [~~If~~] the wood furniture manufacturing facility uses acid-cured alkyd amino vinyl sealers and acid-cured alkyd amino conversion varnish topcoats, the sealer shall contain no more than 2.3 kilograms of VOC per kilogram of solids (2.3 pounds of VOC per pound of solids), as applied, and the topcoat shall contain no more than 2.0 kilograms of VOC per kilogram of solids (2.0 pounds of VOC per pound of solids), as delivered to the application system; or

(II) if [~~If~~] the wood furniture manufacturing facility uses a sealer other than an acid-cured alkyd amino vinyl sealer and acid-cured alkyd amino conversion varnish topcoats, the sealer shall contain no more than 1.9 kilograms of VOC per kilogram of solids (1.9 pounds of VOC per pound of solids), as applied, and the topcoat shall contain no more than 2.0 kilograms of VOC per kilogram of solids (2.0 pounds of VOC per pound of solids), as delivered to the application system; or

(III) if [~~If~~] the wood furniture manufacturing facility uses an acid-cured alkyd amino vinyl sealer and a topcoat other than an acid-cured alkyd amino conversion varnish topcoat, the sealer shall contain no more than 2.3 kilograms of VOC per kilogram of solids (2.3 pounds of VOC per pound of solids), as applied, and the topcoat shall contain no more than 1.8 kilograms of VOC per kilogram of solids (1.8 pounds of VOC per pound of solids), as delivered to the application system; or

(iv) using [~~Using~~] an averaging approach and demonstrating that actual daily emissions from the wood furniture manufacturing facility are less than or equal to the lower of the actual versus allowable emissions using one of the following inequalities: Figure: 30 TAC §115.421(a)(14)(A)(iv) (No change.)

(v) using [Using] a vapor control system that will achieve an equivalent reduction in emissions as the requirements of clauses (i) or (ii) of this subparagraph. If this option is used, the requirements of §115.423(3) of this title do not apply; or

(vi) using [Using] a combination of the methods presented in clauses (i) - (v) [~~(i)~~, ~~(ii)~~, ~~(iii)~~, ~~(iv)~~, and ~~(v)~~] of this subparagraph.

(B) (No change.)

(15) Marine coatings. The following requirements apply to shipbuilding and ship repair operations in the Beaumont/Port Arthur and Houston/Galveston areas.

(A) The following VOC emission limits apply to the surface coating of ships and offshore oil or gas drilling platforms at shipbuilding and ship repair operations, and are based upon the VOC content of the coatings as delivered to the application system. [∓]

Figure: 30 TAC §115.421(a)(15)(A) (No change.)

(B) For a coating to which thinning solvent is routinely or sometimes added, the owner or operator shall determine the VOC content as follows.

(i) Prior to the first application of each batch, designate a single thinner for the coating and calculate the maximum allowable thinning ratio (or ratios, if the shipbuilding and ship repair operation complies with the cold-weather limits in addition to the other limits specified in subparagraph (A) of this paragraph) for each batch as follows. [∓]

Figure: 30 TAC §115.421(a)(15)(B)(i) (No change.)

(ii) If the volume fraction of solids in the batch as supplied (V<sub>s</sub>) [V<sub>s</sub>] is not supplied directly by the coating manufacturer, the owner or operator shall determine V<sub>s</sub> as follows. [∓]

Figure: 30 TAC §115.421(a)(15)(B)(ii) (No change.)

(b) No person in Gregg, Nueces, and Victoria Counties may cause, suffer, allow, or permit VOC emissions from the surface coating processes affected by paragraphs (1) - (9) of this subsection to exceed the specified emission limits. These limitations are based on the daily weighted average of all coatings delivered to each coating line, except for those in paragraph (9) of this subsection which are based on paneling surface area.

(1)-(6) (No change.)

(7) Can coating. The following VOC emission limits shall be achieved, on the basis of solvent content per gallon of coating (minus water and exempt solvent) delivered to the application system. [∓]

Figure: 30 TAC §115.421(b)(7) (No change.)

(8) (No change.)

(9) Factory surface coating of flat wood paneling. The following emission limits shall apply to each product category of factory-finished paneling (regardless of the number of coats applied). [∓]

Figure: 30 TAC §115.421(b)(9) (No change.)

(10) (No change.)

#### §115.427. Exemptions.

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

(1) The following coating operations are exempt from §115.421(a)(9) of this title (relating to Emission Specifications):

(A) [exterior of fully assembled aircraft, except as required by §115.421(a)(9)(A)(v) of this title, and after December 31, 2001, all] aerospace vehicles and components;

(B)-(C) (No change.)

(2) (No change.)

(3) The following exemptions apply to surface coating operations, except for [aircraft prime coating controlled by §115.421(a)(9)(A)(v) of this title and] vehicle refinishing (body shops) controlled by §115.421(a)(8)(B) and (C) of this title. Excluded from the volatile organic compound (VOC) emission calculations are coatings and solvents used in surface coating activities which are not addressed by the surface coating categories of §115.421(a)(1) - (15) of this title. For example, architectural coatings (i.e., coatings which are applied in the field to stationary structures and their appurtenances, to portable buildings, to pavements, or to curbs) at a property would not be included in the calculations.

(A)-(J) (No change.)

(4)-(6) (No change.)

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

(1) (No change.)

(2) The following coating operations are exempt from §115.421(b)(8) of this title:

(A) [exterior of fully assembled aircraft, and after December 31, 2001, all] aerospace vehicles and components;

(B)-(C) (No change.)

(3)-(4) (No change.)

#### §115.429. Counties and Compliance Schedules.

[(a) All wood furniture manufacturing facilities subject to §115.421(a)(14) of this title (relating to Emission Specifications) in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties shall be in compliance with §115.421(a)(14) of this title and §115.422(3) of this title (relating to Control Requirements) as soon as practicable, but no later than December 31, 1999. All wood furniture manufacturing facilities subject to §115.421(a)(14) of this title in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Harris, Liberty, Montgomery, Tarrant, and Waller Counties shall continue to comply with §115.421(a)(13) of this title until these coating operations are in compliance with §115.421(a)(14) and §115.422(3) of this title.]

[(b) All shipbuilding and ship repair surface coating facilities subject to §115.421(a)(15) of this title in Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, and Waller Counties shall be in compliance with this division (relating to Surface Coating Processes) as soon as practicable, but no later than December 31, 1999.]

[(c) The owner or operator of each surface coating operation [All aerospace vehicle and component surface coating processes subject to §§115.421(a)(11) or (b)(10), 115.422(5), 115.425(5), and 115.426(5) of this title (relating to Emission Specifications; Control Requirements; Testing Requirements; and Monitoring and Recordkeeping Requirements)] in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Gregg, Hardin, Harris, Jefferson, Liberty, Montgomery, Nueces, Orange, Tarrant, Victoria, and Waller Counties shall continue to comply with this division (relating to Surface Coating Processes) as required by §115.930 of this title (relating to Compliance Dates) [be in compliance with these sections as soon as practicable, but no later than December 31, 2001. These aerospace vehicle and component surface coating processes shall continue to comply with §115.421(a)(9) or (b)(8) of this title

until these coating processes are in compliance with §§115.421(a)(11) or (b)(10), 115.422(5), 115.425(5), and 115.426(5) of this title].

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

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For further information, please call: (512) 239-0348



## SUBCHAPTER H. HIGHLY-REACTIVE VOLATILE ORGANIC COMPOUNDS DIVISION 1. VENT GAS CONTROL

### 30 TAC §§115.720, 115.722, 115.723, 115.725 - 115.727, 115.729

#### STATUTORY AUTHORITY

The new sections are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The new sections are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §7401 *et seq.*

The proposed new sections implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

#### §115.720. Applicability.

Any vent gas stream in the Houston/Galveston area, as defined in §115.10 of this title (relating to Definitions), which includes a highly-reactive volatile organic compound, as defined in §115.10 of this title, is subject to the requirements of this division (relating to Vent Gas Control) in addition to the applicable requirements of Subchapter B, Divisions 2 and 6 of this chapter (relating to Vent Gas Control; and Batch Processes) and Subchapter D, Division 1 of this chapter (relating to Process Unit Turnaround and Vacuum-Producing Systems in Petroleum Refineries).

#### §115.722. Control Requirements.

(a) For low-density polyethylene plants, the exemption from the requirements of §115.121(a)(1) of this title (relating to Emission Specifications) under §115.127(a)(1) of this title (relating to Exemptions) does not apply. Instead, volatile organic compound (VOC) emissions from low-density polyethylene plants (including the residual VOC, but excluding fugitive emissions) shall not exceed the following emission rates from all the vent gas streams associated with the formation, handling, and storage of solidified product, based on a 30-day rolling average:

(1) if polyethylene is produced with a low-pressure process, 90 pounds of ethylene per 1.0 million pounds of product; and

(2) if polyethylene is produced with a high-pressure process, 200 pounds of ethylene per 1.0 million pounds of product.

(b) As an alternative to the requirements of subsection (a) of this section, all vent gas streams from low-density polyethylene plants shall be controlled properly with a control efficiency of at least 98% or to a VOC concentration of no more than 20 parts per million by volume (ppmv) (on a dry basis corrected to 3.0% oxygen (O<sub>2</sub>) for combustion devices).

(c) Vent gas streams not subject to subsection (a) or (b) of this section shall be controlled properly with a control efficiency of at least 98% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% O<sub>2</sub> for combustion devices), including vent gas streams subject to:

(1) §115.121(a)(1) of this title;

(2) §115.121(a)(2) of this title;

(3) §115.162 of this title (relating to Control Requirements);

(4) §115.312(a)(1)(B) of this title (relating to Control Requirements); and

(5) §115.312(a)(2) of this title.

(d) Whenever VOC emissions are vented to a closed-vent system, control device, or recovery device used to comply with the provisions of this chapter, such system or control device must be operating properly.

(e) Flares used to comply with the appropriate VOC control requirements of subsection (a), (b), or (c) of this section must meet the requirements of:

(1) Division 2 of this subchapter (relating to Flares); and

(2) 40 Code of Federal Regulations §60.18(b) or §63.11(b).

(f) An owner or operator may not use emission reduction credits or discrete emission reduction credits in order to demonstrate compliance with this division (relating to Vent Gas Control).

#### §115.723. Alternate Control Requirements.

The following alternate control requirements are applicable to any vent gas stream which, as of December 31, 2002, is controlled by a control device with a control efficiency of at least 95%, but which is not required by a permit or an applicable state or federal rule to be controlled by a control device with a control efficiency of at least 98% or to a volatile organic compound concentration of no more than 20 parts per million by volume (on a dry basis corrected to 3.0% oxygen for combustion devices).

(1) The owner or operator of the vent gas stream may request an alternate reasonably available control technology (ARACT) determination. The executive director shall approve the ARACT if it

is determined to be economically unreasonable to replace the control device with a control device meeting the requirements of §115.722 of this title (relating to Control Requirements). Each ARACT approved by the executive director shall include a requirement that the control device be operated at its maximum efficiency.

(2) Each ARACT shall only be valid until the control device undergoes a replacement, a modification as defined in 40 Code of Federal Regulations (CFR) §60.14 (October 17, 2000), or a reconstruction as defined in 40 CFR §60.15 (December 16, 1975), at which time the replacement, modified, or reconstructed control device shall meet the requirements of §115.722 of this title.

(3) Any request for an ARACT determination shall be submitted to the executive director no later than March 31, 2003.

(4) The executive director may direct the holder of an ARACT to reapply for an ARACT if it is more than ten years since the date of installation of the control device and there is good cause to believe that it is now economically reasonable to meet the requirements of §115.722 of this title. Within three months of an executive director request, the holder of an ARACT shall reapply for an ARACT. If the reapplication for an ARACT is denied, the holder of the ARACT shall meet the requirements of §115.722 of this title as soon as practicable, but no later than two years from the date of denial.

#### §115.725. Testing Requirements.

(a) The owner or operator must conduct testing with a portable analyzer, or by applying the appropriate reference method tests and procedures specified in §115.125 of this title (relating to Testing Requirements), on all vent gas streams for which the owner or operator has claimed exemption as follows.

(1) Vent gas streams claimed exempt under §115.127(a)(2)(A) or (B), (3), or (4)(C) or §115.727(b) of this title (relating to Exemptions), and vent gas streams not controlled under §115.162 of this title (relating to Control Requirements) from batch processes subject to §115.161(a) of this title (relating to Applicability), must be tested for the volatile organic compound (VOC) concentration. The purpose of this testing for vent gas streams claimed exempt under §115.127 of this title is to determine whether the vent gas stream qualifies for the exemption being claimed. The purpose of this testing for vent gas streams not controlled under §115.162 of this title is to determine whether the vent gas stream should nevertheless be controlled.

(A) The owner or operator must either control the vent gas stream in accordance with §115.722(c) of this title (relating to Control Requirements), or conduct reference method testing in order to determine the VOC mass emission rate, if testing of the vent gas stream with a portable analyzer results in a determination that the VOC concentration exceeds one of the following concentrations:

(i) 306 parts per million by volume (ppmv) for vent gas streams claimed exempt under §115.127(a)(2)(B) or (3)(B) of this title;

(ii) 204 ppmv for vent gas streams claimed exempt under §115.127(a)(3)(C) of this title; or

(iii) 306 ppmv for vent gas streams not controlled under §115.162 of this title from batch processes subject to §115.161(a) of this title.

(B) For each vent gas stream found to exceed the appropriate VOC concentration threshold of subparagraph (A) of this paragraph and for which the owner or operator elects to conduct reference method testing in order to determine the VOC mass emission rate, the vent gas stream must be controlled in accordance with §115.722(c) of

this title if the reference method testing determines that the mass emission rate exceeds a combined weight of VOC greater than 14 pounds in any continuous 24-hour period for vent gas streams claimed exempt under §115.127(a)(2)(A) or (3)(A) of this title.

(C) If a vent gas stream claimed exempt under §115.127(a)(4)(C) of this title is tested with a portable analyzer and the VOC concentration is determined to exceed 250 ppmv, then the owner or operator must either control the vent gas stream in accordance with §115.722(c) of this title, or conduct reference method testing in order to determine the flow rate. If reference method testing determines that the flow rate is greater than 0.011 standard cubic meters per minute, then the vent gas stream must be controlled in accordance with §115.722(c) of this title.

(2) All testing under this subsection shall be conducted at maximum operating conditions. The owner or operator shall document the operating parameter levels that occurred during any testing, and the maximum rates feasible (for example, production rate) for the process.

(b) The owner or operator must conduct testing by applying the appropriate reference method tests and procedures specified in §115.125 of this title on all control devices used to control vent gas streams subject to §115.722 of this title. The purpose of this testing is to demonstrate compliance with the requirements of §115.722 of this title.

(c) The owner or operator is responsible for providing testing facilities and conducting the sampling and testing operations at his expense.

(1) The appropriate regional office shall be contacted as soon as testing is scheduled, but not less than 45 days prior to testing to schedule a pretest meeting. The notice shall include:

(A) the date for pretest meeting;

(B) the date the testing will occur;

(C) the name of the firm conducting testing;

(D) the type of testing equipment to be used; and

(E) the method or procedure to be used in testing.

(2) The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

(3) A written proposed description of any minor test method modifications allowed under §115.125(4) of this title shall be made available to the regional office before the pretest meeting. The regional director or the manager of the Engineering Services Team, Office of Compliance and Enforcement, will approve or disapprove of any deviation from specified sampling procedures.

(4) The plant shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of a production rate shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. If the plant is unable to operate at maximum rates during testing, then future production rates are limited to the rates established during testing. Additional stack testing is required before higher production rates are achieved.

(5) The owner or operator shall furnish the Office of Compliance and Enforcement, the appropriate regional office, and any local air pollution control agency having jurisdiction a copy of the final sampling report within 60 days after sampling is completed.

(d) Any continuous monitoring system required by §§115.126, 115.166, 115.316, or 115.726 of this title (relating to Monitoring and Recordkeeping Requirements) shall be installed and operational before conducting testing of control devices under subsection (b) of this section. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device or system.

(e) Early testing conducted before December 31, 2002 may be used to demonstrate compliance with the standards specified in this division, if the owner or operator of an affected facility demonstrates to the satisfaction of the executive director that the prior compliance testing at least meets the requirements of subsections (a) - (c) of this section. For early testing, the compliance stack test report required by subsection (f) of this section shall be as complete as necessary to demonstrate to the executive director that the stack test was valid and the source has complied with the rule. The executive director reserves the right to request compliance testing or monitoring system performance evaluation at any time.

(f) Compliance stack test reports must include the following minimum contents.

(1) Introductory information. Provide background information pertinent to the test, including:

(A) company name, address, and name of company official responsible for submitting report;

(B) name and address of testing organization;

(C) names of persons present, and dates and location of test;

(D) schematic drawings of the unit being tested, showing emission points, sampling sites, and stack cross section with the sampling points labeled and dimensions indicated;

(E) description of the process being sampled; and

(F) emission point number (EPN) and facility identification number (FIN) used to identify the unit in the emissions inventory and applicable air permits.

(2) Summary information. Provide summary information, including:

(A) a summary of emission rates found, reported in the units of the applicable emission or exemption limits and averaging periods, and compared with the applicable emission or exemption limit;

(B) the maximum rated capacity, normal maximum capacity, and actual operating level of the unit during the test, and description of the method used to determine such operating level;

(C) the operating parameters of any active VOC control equipment during the test, (for example, the exhaust gas temperature immediately downstream of a direct-flame incinerator); and

(D) documentation that no changes to the process have occurred since the compliance test was conducted that could result in a significant change in VOC emissions.

(3) Procedure. Describe the procedures used and operation of the sampling train and process during the test, including:

(A) a schematic drawing of the sampling devices used with each component designated and explained in a legend;

(B) a brief description of the method used to operate the sampling train and procedure used to recover samples; and

(C) deviation from reference methods, if any.

(4) Analytical technique. Provide a brief description of all analytical techniques used to determine the emissions from the source.

(5) Data and calculations. Include all data and calculations, of:

(A) field data collected on raw data sheets;

(B) log of process operating levels;

(C) laboratory data, including blanks, tare weights, and results of analysis; and

(D) emission calculations.

(6) Chain of custody. Include a listing of the chain of custody of the emission or fuel test samples, as applicable.

(7) Appendix. Provide:

(A) calibration work sheets for sampling equipment;

(B) collection of process logs of process parameters;

(C) brief resume/qualifications of test personnel; and

(D) description of applicable continuous monitoring system, as applicable.

§115.726. Monitoring and Recordkeeping Requirements.

(a) Vapor control systems. For all vapor control systems used to control emissions from vents subject to this division (relating to Vent Gas Control), the owner or operator shall comply with the monitoring and recordkeeping requirements of §115.126(1)(A) - (C) or §115.166(1) of this title (relating to Monitoring and Recordkeeping Requirements).

(b) Test results. The owner or operator shall maintain a record of the results of all testing conducted in accordance with §115.725 of this title (relating to Testing Requirements).

(c) Records for low-density polyethylene plants. The owner or operator of each low-density polyethylene plant subject to the requirements of §115.722(a) of this title (relating to Control Requirements) shall maintain records which are sufficient to demonstrate compliance with the emission limit of §115.722(a) of this title in pounds of ethylene emitted per million pounds of low-density polyethylene produced.

(d) Records for exempted vents.

(1) Records for each vent exempted from control requirements under §115.127(a)(2)(A) or (B), (3), or (4)(C) of this title (relating to Exemptions) must be sufficient to demonstrate continuous compliance with the applicable exemption limit. These records shall include complete information from test results which clearly documents that the emission characteristics at maximum actual operating conditions are less than the applicable exemption limit. This documentation shall include the operating parameter levels that occurred during testing and the maximum levels feasible (either volatile organic compound (VOC) concentration or mass emission rate) for the process.

(2) Records for each vent exempted from control requirements under §115.727 of this title (relating to Exemptions) must be sufficient to demonstrate continuous compliance with the applicable exemption limit. These records shall include complete information from test results which clearly documents that the emission characteristics at maximum actual operating conditions are less than the applicable exemption limit. This documentation shall include the operating parameter levels that occurred during testing and the maximum levels feasible (i.e., concentration of highly-reactive VOC) for the vent gas stream.

(e) Retention and availability of records. The owner or operator shall maintain all records for at least five years and make them available for review upon request by authorized representatives of the executive director, EPA, or local air pollution control agencies with jurisdiction.

§115.727. Exemptions.

(a) Any vent gas stream in which highly-reactive volatile organic compounds (VOC) comprise less than 1.0% by weight of the VOC in the vent gas stream are exempt from the requirements of this division (relating to Vent Gas Control), except for:

(1) testing in accordance with §115.725 of this title (relating to Testing Requirements); and

(2) monitoring and recordkeeping in accordance with §115.726 of this title (relating to Monitoring and Recordkeeping Requirements).

(b) At low-density polyethylene plants complying with §115.722(b) of this title (relating to Control Requirements), each vent gas stream which has a VOC concentration less than 100 parts per million by volume (ppmv) is exempt from the requirement to control emissions properly with a control efficiency of at least 98% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices), provided that the required reference method testing determines that the mass emission rate for the vent does not exceed 14 pounds of VOC in any continuous 24-hour period.

(c) For vent gas streams claimed exempt under §115.127(a)(2)(A) or (B), (3), or (4)(C) of this title (relating to Exemptions), and vent gas streams not controlled under §115.162 of this title (relating to Control Requirements) from batch processes subject to §115.161(a) of this title (relating to Applicability), the following vent gas streams containing highly-reactive VOC are exempt from the requirements of this division, except for testing in accordance with §115.725 of this title and monitoring and recordkeeping in accordance with §115.726 of this title, provided that the required reference method testing determines that the mass emission rate for the vent is no more than 14 pounds of VOC in any continuous 24-hour period, and the VOC concentration does not exceed:

(1) 306 ppmv for vent gas streams claimed exempt under §115.127(a)(2)(B) or (3)(B) of this title;

(2) 204 ppmv for vent gas streams claimed exempt under §115.127(a)(3)(C) of this title;

(3) 250 ppmv for vent gas streams claimed exempt under §115.127(a)(4)(C) of this title; and

(4) 306 ppmv for vent gas streams not controlled under §115.162 of this title from batch processes subject to §115.161(a) of this title.

(d) Any vent gas stream which qualifies for exemption under §115.127(a)(6) of this title is exempt from the requirements of this division.

§115.729. Counties and Compliance Schedules.

The owner or operator of each vent gas stream in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall demonstrate compliance with the requirements of this division (relating to Vent Gas Control) in accordance with the following schedule.

(1) The testing required by §115.725 of this title (relating to Testing Requirements) shall be completed and the results submitted as soon as practicable, but no later than December 31, 2003.

(2) The owner or operator shall demonstrate compliance with all other requirements of this division as soon as practicable, but no later than December 31, 2004.

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

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Stephanie Bergeron

Director, Environmental Law Division

Texas Natural Resource Conservation Commission

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For further information, please call: (512) 239-0348



## DIVISION 2. FLARES

### 30 TAC §§115.740 - 115.747, 115.749

#### STATUTORY AUTHORITY

The new sections are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The new sections are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed new sections implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

#### §115.740. Applicability and Flare Definitions.

(a) Applicability. Any flare in the Houston/Galveston area, as defined in §115.10 of this title (relating to Definitions), which emits, or has the potential to emit, a highly-reactive volatile organic compound (VOC), as defined in §115.10 of this title, is subject to the requirements of this division (relating to Flares) in addition to the applicable requirements of any other subchapter in this chapter.

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

(1) Supplementary fuel--Natural gas or fuel gas added to the gas stream to increase the net heating value to minimum require value.

(2) Pilot gas--Gas that is used to ignite or continually ignite flare gas.

§115.741. Emission Specifications.

The total highly-reactive volatile organic compound emission rate for each flare at an account shall not exceed 0.6 pounds per hour. If this emission rate is exceeded and exemption is claimed under §101.222 of this title (relating to Demonstrations), the owner or operator must use the records that are required to be retained under §115.746 of this title (relating to Recordkeeping Requirements) in the calculation and justification of those excess emissions in order to demonstrate compliance with §101.222 of this title.

§115.742. Control Requirements.

(a) All flares shall continuously comply with 40 Code of Federal Regulations §60.18 as amended through October 17, 2000 (65 FR 61744).

(b) Corrective action to decrease the highly-reactive volatile organic compound emission rate below the limit stated in §115.741 of this title (relating to Emission Specifications) shall commence immediately once monitoring data shows an exceedance of those levels. This corrective action must be completed within 24 hours.

§115.743. Alternate Control Requirements.

For all persons in the counties specified in §115.749 of this title (relating to Counties and Compliance Schedules), alternate methods of demonstrating and documenting continuous compliance with the applicable emission specifications, control requirements, or exemption criteria in this division (relating to Flares) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent. However, an owner or operator may not use emission reduction credits or discrete emission reduction credits in order to demonstrate compliance with §115.741 of this title (relating to Emission Specifications).

§115.744. Monitoring Requirements.

All persons with affected flares shall continuously monitor the mass flow rate of highly-reactive volatile organic compounds (VOC) routed to the flare, the net heating value of the gas stream routed to the flare, and the exit velocity at the flare tip using the following.

(1) For demonstrating continuous compliance with the maximum flare exit velocity requirements of 40 Code of Federal Regulations §60.18 as amended through October 17, 2000 (65 FR 61744), the owner or operator of a flare shall install, calibrate, and operate a continuous flow monitoring device on the main flare header (located after the knock-out pot and addition of any supplementary fuel) capable of measuring the flow rate over the full range of expected operation. The flow monitoring device shall meet the accuracy requirements of 40 CFR 60, Appendix A, Method 2D as amended through October 17, 2000 (65 FR 61744). For correcting flow rate to standard conditions (defined as 68 degrees Fahrenheit and 29.92 inches of mercury), temperature and pressure in the main flare header shall be monitored continuously with temperature and pressure gauges meeting the specifications of Method 2D. The flow monitoring device, temperature gauge, and pressure gauge shall be calibrated on an

annual basis to meet the specifications of Method 2D. Actual exit velocity of the flare shall be determined based on continuous flow rate, temperature, and pressure monitor data and calculated according to 40 CFR §60.18(f)(4) as amended through October 17, 2000 (65 FR 61744).

(2) For demonstrating continuous compliance with minimum net heating value requirements of 40 CFR §60.18 and with the highly-reactive VOC mass rate specified in §115.741 of this title (relating to Emission Specifications), the owner or operator of a flare shall install, calibrate, maintain, and operate an on-line analyzer capable of determining highly-reactive VOC constituents in the flare header gas, at least once every 15 minutes. Samples shall be collected from a location on the main flare header after the knock-out pot and addition of any supplementary fuel. For determining the highly-reactive VOC concentrations in the flare header gas, samples shall be analyzed according to the procedures in 40 CFR 60, Appendix A, Method 18 as amended through October 17, 2000 (65 FR 61744). Samples shall be analyzed by American Standard of Testing Materials (ASTM) Standard D1946-77 to determine inorganic constituents (including, but not limited to, hydrogen, carbon monoxide, oxygen, nitrogen, and carbon dioxide). Daily calibration of the on-line analyzer shall follow the procedures of section 10.0 "Calibration and Standardization" of 40 CFR 60, Appendix B, Performance Specification 9, as amended through October 17, 2000 (65 FR 61744). Net heating value of the gas combusted in the flare shall be calculated according to the equation given in 40 CFR §60.18(f)(3) as amended through October 17, 2000 (65 FR 61744). Pilot gas shall not be included in the determination of the net heating value.

(3) Modifications to these monitoring methods may be approved by the executive director.

§115.745. Reporting Requirements.

The owner or operator of a flare shall report, in writing, to the Technical Analysis Division within 30 days following the end of each calendar quarter the average-hourly emission rate of all highly-reactive volatile organic compounds in the flare header gas.

§115.746. Recordkeeping Requirements.

The owner or operator of a flare at an account that is subject to this division (relating to Flares) shall:

(1) maintain records of the total emission rate on a pounds-per-hour basis for each flare at an account that have highly-reactive volatile organic compound (VOC) in the gas stream in order demonstrate continuous compliance with the applicable criteria of §115.741 and §115.747 of this title (relating to Emission Specifications; and Exemptions). This collection of data shall include the on-line analyzed data as referenced in §115.744 of this title (relating to Monitoring Requirements);

(2) maintain records on a weekly basis that detail any delay in corrective action associated with §115.742 of this title (relating to Control Requirements);

(3) maintain records of the net heating value of the gas stream routed to the flare and the exit velocity at the flare tip; and

(4) maintain all records requested in paragraphs (1) - (3) of this section for five years and make available for review upon request by authorized representatives of the executive director, EPA, or any local air pollution control agency with jurisdiction.

§115.747. Exemptions.

The total of the gas streams, including supplemental fuel, that is routed to a flare in which highly-reactive volatile organic compound (VOC) comprise less than 1.0% by weight of the total VOC in the gas stream and where the emission rates are below the limits stated in §115.741

of this title (relating to Emission Specifications) are exempt from the control requirements of §115.742(b) of this title (relating to Control Requirements).

§115.749. Counties and Compliance Schedules.

The owner or operator of a flare in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall demonstrate compliance with all sections of this division (relating to Flares) as soon as practicable, but no later than December 31, 2003 with the exception for emission specification requirements in §115.741 of this title (relating to Emission Specifications) and control requirements in §115.742(b) of this title (relating to Control Requirements), for which the owner or operator shall demonstrate compliance as soon as practicable, but no later than December 31, 2005. However, if a flare at an account has monitoring data that reflects any highly-reactive volatile organic compound, then the reporting requirements of this division are applicable and data must be submitted to the Technical Analysis Division no later than April 30, 2003.

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

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### DIVISION 3. COOLING TOWER HEAT EXCHANGE SYSTEMS

#### 30 TAC §§115.760 - 115.769

##### STATUTORY AUTHORITY

The new sections are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The new sections are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed new sections implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring

Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

§115.760. Applicability and Cooling Tower Heat Exchange System Definitions.

(a) Applicability. Any cooling tower heat exchange system in the Houston/Galveston area, as defined in §115.10 of this title (relating to Definitions), which emits or has the potential to emit a highly-reactive volatile organic compound (VOC), as defined in §115.10 of this title, is subject to the requirements of this division (relating to Cooling Tower Heat Exchange Systems) in addition to the applicable requirements of any other division in this chapter.

(b) Definitions. The following terms, when used in this division, shall have the following meanings, unless the context clearly indicates otherwise. Additional definitions for terms used in this division are found in §§3.2, 101.1, and 115.10 of this title (relating to Definitions). Cooling tower heat exchange system--Cooling towers, associated heat exchangers, pumps, and ancillary equipment where water is used as a cooling medium and the heat from process fluids is transferred to cooling water. This does not include fin-fan coolers. This also does not include comfort cooling tower heat exchange systems (i.e., those which are used exclusively in cooling, heating, ventilation, and air conditioning systems).

§115.761. Emission Specifications.

No individual cooling tower heat exchange system shall be allowed to operate with an emission rate greater than 8.0 pounds per hour for all highly-reactive volatile organic compounds, as defined in §115.10 of this title (relating to Definitions). If this emission rate is exceeded and exemption is claimed under §101.222 of this title (relating to Demonstrations), the owner or operator must use the records that are required to be retained under §115.767 of this title (relating to Recordkeeping Requirements) in the calculation and justification of those excess emissions in order to demonstrate compliance with §101.222 of this title.

§115.762. Control Requirements.

Corrective action to eliminate excess emissions above the limit stated in §115.761 of this title (relating to Emission Specifications) shall be completed within 24 hours from when the sample is collected. To demonstrate that excess emissions are eliminated, testing in accordance with appropriate methods in §115.766 of this title (relating to Testing Requirements) shall be performed to show compliance with the applicable emission specification in §115.761 of this title.

§115.763. Alternate Control Requirements.

Alternate methods of demonstrating and documenting continuous compliance with the applicable emission specifications, control requirements, or exemption criteria in this division (relating to Cooling Tower Heat Exchange Systems) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent. However, an owner or operator may not use emission reduction credits or discrete emission reduction credits in order to demonstrate compliance with §115.761 of this title (relating to Emission Specifications).

§115.764. Monitoring Requirements.

The owner or operator of each cooling tower heat exchange system shall comply with the following monitoring requirements.

(1) The owner or operator of a cooling water heat exchange system equal to or greater than 8,000 gallons per minute of cooling water circulated shall install, calibrate, and operate continuous flow

monitors on the inlet and outlet of each cooling tower and continuous volatile organic compound (VOC) monitors on the inlet and outlet of each cooling tower that are capable of detecting highly-reactive VOC, as defined in §115.10 of this title (relating to Definitions). The flow rate of cooling water shall be used in conjunction with the VOC inlet and outlet monitored value to calculate the pounds-per-hour emitted for all highly-reactive VOC to determine compliance with the emission specification in §115.761 of this title (relating to Emission Specifications). During out-of-order periods of the VOC monitor(s), a grab sample shall be collected every eight hours to verify that the highly-reactive VOC emission rate is in compliance with §115.761 of this title.

(2) The owner or operator of a cooling water heat exchange system less than 8,000 gallons per minute of cooling water circulated shall install, calibrate, and operate continuous flow monitors on the inlet and outlet of each cooling tower and perform, at a minimum, sampling twice a week to determine the concentration of all highly-reactive VOCs, in the cooling water using one of the test methods of §115.766 of this title (relating to Testing Requirements) as appropriate. The flow rate of cooling water shall be used in conjunction with the sampled data to calculate the pounds-per-hour emitted for all highly-reactive VOCs to determine compliance with the emission specification in §115.761 of this title.

(3) The owner or operator of a cooling water heat exchange system shall submit for review and approval by the Engineering Services Team, a quality assurance plan for installation, calibration, operation, and maintenance for the monitoring programs. This plan shall be submitted prior to initiating a monitoring program to comply with the requirements of paragraph (1) or (2) of this section. Additionally, the plan must define each compound which could potentially leak through the heat exchanger and therefore directly impact the emissions of cooling water system.

#### §115.765. Reporting Requirements.

The owner or operator of each cooling tower heat exchange system shall report the following, in writing, to the Technical Analysis Division within 30 days following the end of each calendar quarter:

(1) the average-hourly highly-reactive volatile organic compound emission rate; and

(2) the total amount of chlorine introduced into each cooling tower heat exchange system on an hourly basis.

#### §115.766. Testing Requirements.

Compliance with this division (relating to Cooling Tower Heat Exchange Systems) shall be determined by applying the following test methods as appropriate.

(1) For determining highly-reactive volatile organic compound (VOC) concentration in cooling tower water where a continuous monitor is required, a device shall be installed which, at a minimum, will determine a surrogate VOC level in the stripped gas. The continuous monitor will be calibrated with a known specie which best represents potential in leakage into the cooling tower system, and the emissions from the system.

(2) For determining the concentration of VOC in cooling water where any of the VOCs in any portion of a process stream contacting a heat exchanger have normal boiling points equal to or less than 140 degrees Fahrenheit, the sampling method shall be the air-stripping method for cooling towers. The samples obtained from the air-stripping method shall be collected in a summa canister that is under a vacuum and prior to the addition of any drying agent. In addition, the summa canister shall be equipped with a critical orifice or needle valve precalibrated to flow at not more than 500 cubic centimeters per minute. The samples shall be analyzed according to the procedures in

Test Method 18, 40 Code of Federal Regulations (CFR) 60, Appendix A, and/or Method TO-14A, published in "U.S. EPA Compendium for Determination of Toxic Organic Compounds in Ambient Air," EPA Document Number 625/R96/010B. The minimum detection limit of the testing system shall be no more than ten parts per billion by weight (ppbw) in the water.

(3) For determining the concentration of highly-reactive VOC in cooling water where the heat exchange system in which all of the highly-reactive VOCs in the associated process(es) have normal boiling points greater than 140 degrees Fahrenheit, direct water analysis may be used in lieu of the air-stripping method in paragraph (2) of this section. Samples for direct water analysis must be collected in volatile organic analysis vials following the procedures in 40 CFR §61.355(c)(3)(ii)(A) - (H) (excluding the static mixer requirement). The samples shall be prepared according to SW-846 Method 5030B and analyzed using SW-846, Test Method 8260B, with all tentatively identified compounds included in the analysis. The minimum detection limit of the testing system shall be no more than ten ppbw in the water.

(4) Modifications to these test methods or alternative test methods may be approved by the executive director.

#### §115.767. Recordkeeping Requirements.

The owner or operator of any cooling tower heat exchange system shall comply with the following recordkeeping requirements:

(1) establish and maintain a process diagram of the cooling tower heat exchange system, including the points at which the system will be monitored and sampled such that the cooling water is not exposed to the atmosphere prior to sampling;

(2) maintain records that document the continuous flow rate and the highly-reactive volatile organic compound (VOC) monitoring data for each cooling tower heat exchange system;

(3) maintain hourly records that document the pounds-per-hour emitted for all highly-reactive VOC in the process fluid for each cooling tower heat exchange system with a cooling water circulation rate equal to or greater than 8,000 gallons per minute to demonstrate continuous compliance with the applicable criteria of §115.761 of this title (relating to Emission Specifications);

(4) maintain records on a weekly basis that document the pounds-per-hour emitted for all highly-reactive VOC in the process fluid for each cooling tower heat exchange system with a cooling water circulation rate less than 8,000 gallons per minute to demonstrate continuous compliance with the applicable criteria of §115.761 of this title;

(5) maintain records of all tests in accordance with the provisions of §115.766 of this title (relating to Testing Requirements), as well as records of in-house testing.

(6) maintain records on a weekly basis that detail all corrective actions, or any delay in corrective action, taken by documenting the dates, reasons, and durations of such occurrences and the estimated quantity of all highly-reactive VOC emissions during such activities;

(7) maintain records of heat exchanger pressure differential to document continuous compliance with the exemption criteria of §115.768(1) of this title (relating to Exemptions);

(8) maintain records of highly-reactive VOC content in the process stream by weight to demonstrate continuous compliance with the exemption criteria of §115.768(2) of this title; and

(9) maintain all records for five years and make available for review upon request by authorized representatives of the executive

director, EPA, or any local air pollution control agency with jurisdiction.

§115.768. Exemptions.

The following exemptions shall apply.

(1) Any cooling tower heat exchange system that is operated with the minimum pressure on the cooling water side at least five pounds per square inch gauge (psig) greater than the maximum pressure on the process side is exempt from the control requirements of §115.762 of this title (relating to Control Requirements).

(2) Any cooling tower heat exchange system in which highly-reactive volatile organic compounds (VOC) comprise less than 1.0% by weight of the total VOC in each heat exchanger and the emission limits are below the limits stated in §115.761 of this title (relating to Emission Specifications) are exempt from the control requirements of §115.762 of this title.

§115.769. Counties and Compliance Schedules.

The owner or operator of each cooling tower heat exchange system in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall demonstrate compliance with all sections of this division (relating to Cooling Tower Heat Exchange Systems) as soon as practicable, but no later than December 31, 2003 with the exception for the emission specification requirements in §115.761 of this title (relating to Emission Specifications) and control requirements in §115.762 of this title (relating to Control Requirements), for which the owner or operator shall demonstrate compliance as soon as practicable, but no later than December 31, 2005. However, if a cooling tower heat exchange system at an account has data that reflects chlorine usage amounts and/or monitoring data for any highly-reactive volatile organic compound, then the reporting requirements of this division are applicable and data must be submitted to the Technical Analysis Division no later than April 30, 2003.

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

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## DIVISION 4. FUGITIVE EMISSIONS

### 30 TAC §§115.780 - 115.789

#### STATUTORY AUTHORITY

The new sections are proposed under TWC, §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC; and under THSC, TCAA, §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA. The new sections are also proposed under TCAA, §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.016, concerning Monitoring Requirements; Examination of Records,

which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.034, concerning Research and Investigations, which authorizes the commission to require any research it considers advisable and necessary to perform its duties; and §382.051(d), concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382; and FCAA, 42 USC, §§7401 *et seq.*

The proposed new sections implement TCAA, §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.016, concerning Monitoring Requirements; Examination of Records; §382.017, relating to Rules; and §382.051(d), concerning Permitting Authority of Commission; Rules; and TWC, §5.103, relating to Rules.

§115.780. Applicability.

Any petroleum refinery; synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing process; or natural gas/gasoline processing operation in the Houston/Galveston area, as defined in §115.10 of this title (relating to Definitions), in which a highly-reactive volatile organic compound (VOC), as defined in §115.10 of this title, is a raw material, intermediate, final product, or in a waste stream is subject to the requirements of this division (relating to Fugitive Emissions) in addition to the applicable requirements of Subchapter D, Division 3 of this chapter (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas).

§115.781. General Monitoring and Inspection Requirements.

(a) The owner or operator shall identify the components of each unit which is subject to this division (relating to Fugitive Emissions). Such identification must allow for ready identification of the components, and distinction from any components of another unit which is not subject to this division. The components must be identified by one or more of the following methods:

- (1) a plant site plan;
- (2) color coding;
- (3) a written or electronic database;
- (4) designation of unit boundaries;
- (5) some form of weatherproof identification; or
- (6) process flow diagrams that exhibit sufficient detail to identify major pieces of equipment, including major process flows to, from, and within a unit. Major equipment includes, but is not limited to, columns, reactors, pumps, compressors, drums, tanks, and exchangers.

(b) Each component in the unit must be monitored according to the requirements of Subchapter D, Division 3 of this chapter (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas), except that the following additional requirements apply:

- (1) the exemptions of §115.357 of this title (relating to Exemptions) do not apply;
- (2) the leak-skip provisions of §115.354(7) and (8) of this title (relating to Inspection Requirements) do not apply;
- (3) the emissions from blind flanges, caps, or plugs at the end of a pipe or line containing volatile organic compounds (VOC); connectors; heat exchanger heads; sight glasses; meters; gauges; sampling connections; bolted manways; hatches; agitators; sump covers; stormwater drains; junction box vents; covers and seals on VOC water

separators; and process drains shall be monitored each calendar quarter (with a hydrocarbon gas analyzer);

(4) all components that have been opened or repaired during a shutdown shall be monitored (with a hydrocarbon gas analyzer) and inspected for leaks within seven days after startup is completed following the shutdown;

(5) all process drains equipped with water seal controls, as defined in §115.140 of this title (relating to Industrial Wastewater Definitions), shall be inspected daily to ensure that the water seal controls are effective in preventing ventilation. Upon request by the executive director, EPA, or any local program with jurisdiction, the owner or operator shall demonstrate (e.g., by visual inspection or smoke test) that the water seal controls are properly designed and restrict ventilation;

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

(7) all components required to be monitored quarterly (with a hydrocarbon gas analyzer) shall be monitored twice during the third quarter (July - September) of each year as follows: once between July 1 and August 15, and again between August 16 and September 30. There shall be at least 30 days between the dates that a component is monitored during the third quarter of each year;

(8) all pressure relief valves in gaseous service which are not vented to a closed-vent system shall be monitored each calendar quarter (with a hydrocarbon gas analyzer), regardless of the accessibility of the pressure relief valves;

(9) a leak is defined as a VOC concentration greater than 500 parts per million by volume (ppmv) above background as methane for all components;

(10) for the hydrocarbon gas analyzer being used to monitor components for leaks, if the relative response factor multiplier of VOCs expected to be emitted from a component is greater than 1.0, then that response factor should be used to correct measured concentrations to determine if a leak is occurring; and

(11) monitored VOC concentrations must be recorded for each component. Notations such as "pegged," "off scale," "leaking," "not leaking," or "below leak definition" may not be substituted for hydrocarbon gas analyzer results. For readings that are higher than the upper end of the scale (i.e., pegged) even when using the highest scale setting or a dilution probe, record a default pegged value of 500,000 ppmv.

(c) Pumps, compressors, and agitators must be:

(1) inspected each calendar week for indications of liquid dripping from the seals; or

(2) equipped with an alarm that alerts the operator of a leak.

(d) If securing the bypass line valve in the closed position to comply with §115.783(1)(B) of this title (relating to Equipment Standards), the seal or closure mechanism must be visually inspected to ensure the valve is maintained in the closed position and the vent stream is not diverted through the bypass line:

(1) on a weekly basis; and

(2) after any maintenance activity that requires the seal to be broken.

(e) Any pressure relief device which has a release event, as defined in §115.784 of this title (relating to Prevention Measures Procedures), shall be monitored (with a hydrocarbon gas analyzer) and inspected within 24 hours after actuation and the results reported in accordance with §115.784(d)(8) of this title.

§115.782. *Procedures and Schedule for Leak Repair and Follow-up.*

(a) Tagging. Upon the detection or designation of a leaking component, a weatherproof and readily visible tag, bearing the component identification and the date the leak was detected, must be affixed to the leaking component. The tag must remain in place until the leaking component is repaired.

(b) General rule - time to repair. A first attempt at repairing a leaking component shall be made no later than 24 hours after the leak is detected, and the component shall be repaired no later than 15 calendar days after the leak is detected.

(c) Delay of repair.

(1) For all components (except valves which are not pressure relief valves or automatic control valves), repair may be delayed beyond the 15-day period designated in subsection (b) of this section for any of the following reasons:

(A) the component is isolated from the process and does not remain in volatile organic compound (VOC) service;

(B) if the repair of a component would require a unit shutdown which would create more emissions than the repair would eliminate, the repair may be delayed until the next shutdown, provided that:

(i) the owner or operator complies with the requirements of §115.352(2)(A) of this title (relating to Control Requirements); and

(ii) repair or replacement of these components occurs within four years of the original leak detection or at the next shutdown, whichever comes first. The executive director, at his discretion, may require an early unit shutdown, or other appropriate action, based on the number and severity of leaks awaiting a shutdown; or

(C) the components are pumps, compressors, or agitators, and:

(i) repair requires replacing the existing seal design with:

(I) a dual mechanical seal system that includes a barrier fluid system;

(II) a system that is designed with no externally actuated shaft penetrating the housing; or

(III) a closed-vent system and control device that meets the requirements of §115.783 of this title (relating to Equipment Standards); and

(ii) repair is completed as soon as practicable, but not later than six months after the leak was detected.

(2) For valves which are not pressure relief valves or automatic control valves, repair may be delayed beyond the 15-day period designated in subsection (b) of this section if:

(A) repair of these valves occurs within four years of the original leak detection or at the next shutdown, whichever comes first; and

(i) the owner or operator has undertaken "extraordinary efforts" to repair the leaking valve. For valves, extraordinary efforts for repairs are defined as nonroutine repair methods (e.g., sealant

injection). The extraordinary effort shall be undertaken within seven days of the valve being placed on the shutdown list. The owner or operator may keep the leaking valve on the shutdown list after two unsuccessful attempts to repair a leaking valve through extraordinary efforts, provided the second extraordinary effort attempt is made within seven days of the first extraordinary effort attempt; or

(ii) the owner or operator submits documentation to the Office of Compliance and Enforcement, the appropriate regional office, and any local air pollution control agency having jurisdiction which demonstrates that there is a safety, mechanical, or major environmental concern posed by repairing the leak by using "extraordinary efforts." The manager of the Engineering Services Team will approve or disapprove of any such demonstration; or

(B) the valve is isolated from the process and does not remain in VOC service.

(3) All components on the shutdown list must continue to be monitored in accordance with §115.781(b) of this title (relating to General Monitoring and Inspection Requirements).

(d) Monitoring and inspection following shutdown. Follow-up monitoring (with a hydrocarbon gas analyzer) and inspection of components that have been opened or repaired during a shutdown must be completed as soon as practicable, but no later than seven days after the startup of the unit, except that:

(1) all components which were placed on the shutdown list at least one year prior to the shutdown shall be monitored for leaks (with a hydrocarbon gas analyzer) within one day after startup of the unit following the shutdown; and

(2) if the monitoring which is required one day after startup confirms that a component specified in paragraph (1) of this subsection is continuing to leak, then the unit shall be shut down for repair or replacement of the component. This process shall continue until the required monitoring one day after startup confirms that the component no longer leaks.

(e) Limitations for non-repairable components. Any component which cannot be repaired as required by subsection (b) of this section and, for valves other than pressure relief valves, subsection (c)(2) of this section, must comply with the following conditions.

(1) The component must be replaced within four years of the original leak detection or at the next shutdown, whichever comes first.

(2) The number of components awaiting replacement in each unit shall not exceed the percentage expressed in the following table, or one component, whichever is greater, for each component category. In addition, the total number of components awaiting replacement in each unit shall not exceed 0.5%, or 25 components, whichever is less (e.g., units with 3,299 and 6,000 components would be limited to a total of 16 and 25 components awaiting replacement, respectively), except that each unit with fewer than 200 components is limited to a total of one component awaiting replacement.

Figure: 30 TAC §115.782(e)(2)

(3) As an alternative to paragraph (2) of this subsection, the owner or operator may choose to comply with the following requirements for each unit.

(A) The component must be measured for mass emissions within seven calendar days after the leak is discovered.

(B) Each component's VOC mass emission measurement must be less than the applicable mass emission standard, and the corresponding total number of non-repairable components, including

non-repairable components from paragraph (2) of this subsection, must be less than the applicable standard in the following table.

Figure: 30 TAC §115.782(e)(3)(B)

(C) If the component's mass emission measurement is greater than 15 pounds per day (lb/day) total VOC, then that component must be repaired within seven calendar days after the mass emission measurement.

(D) The mass emission measurement specified in subparagraphs (A) - (C) of this paragraph shall be determined by using the methods in the EPA guidance document "Protocol for Equipment Leak Emission Estimates," Chapter 4, Mass Emission Sampling, (EPA-453/R-95-017, November, 1995).

(4) For paragraphs (2) and (3) of this subsection, the total number of components in each unit is calculated as the number of components which are required to be monitored by §115.781 of this title, based on an average of the most recent four quarters.

§115.783. *Equipment Standards.*

The following equipment standards shall apply.

(1) Closed-vent systems containing bypass lines (excluding low-leg drains, high-point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes) that could divert a vent stream away from the control device and to the atmosphere, must have either:

(A) a flow indicator that determines whether vent stream flow is present at least once every 15 minutes; or

(B) the bypass line valve secured in the closed position with a car-seal or a lock-and-key type configuration.

(2) Whenever volatile organic compound (VOC) emissions are vented to a closed-vent system, control device, or recovery device used to comply with the provisions of this chapter, such system or control device must be operating properly.

(A) Recovery devices (e.g., condensers and absorbers) used to comply with this paragraph must be designed and operated to recover the VOC emissions vented to them with an efficiency of 95% or greater.

(B) Flares used to comply with this paragraph must meet the requirements of:

(i) Division 2 of this subchapter (relating to Flares); and

(ii) 40 Code of Federal Regulations §60.18(b) or §63.11(b).

(C) All other control devices used to comply with this paragraph must reduce VOC emissions with a control efficiency of at least 98% or to a VOC concentration of no more than 20 parts per million by volume (on a dry basis corrected to 3.0% oxygen for combustion devices).

(3) Each pressure relief valve shall be equipped with a rupture disk and pressure sensing device between the pressure relief valve and the rupture disk. Failed rupture disks shall be replaced as soon as practicable, but no later than five calendar days after the failure is detected.

(4) Pumps, compressors, and agitators shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal.

(A) Acceptable shaft sealing systems include:

(i) seals equipped with piping capable of transporting any leakage from the seal(s) back to the process;

(ii) seals with a closed-vent system capable of transporting to a control device any leakage from the seal or seals;

(iii) dual pump seals with a heavy liquid or non-VOC barrier fluid at higher pressure than process pressure; and

(iv) seals with an automatic seal failure detection and alarm system.

(B) The executive director may approve shaft sealing systems different from those specified in subparagraph (A) of this paragraph. The executive director:

(i) shall consider on a case-by-case basis the technological circumstances of the individual pump, compressor, or agitator;

(ii) must determine that the alternative shaft sealing system will result in the lowest emissions level that the pump, compressor, or agitator is capable of meeting after the application of best available control technology; and

(iii) is the Engineering Services Team, Office of Compliance and Enforcement, for purposes of this section.

(C) Any person affected by the executive director's decision to deny a request for approval of an alternative shaft sealing system may file a motion for reconsideration. The requirements of §50.39 or §50.139 of this title (relating to Motion for Reconsideration; and Motion to Overturn Executive Director's Decision) apply. However, only a person affected may file a motion for reconsideration. Executive director approval does not necessarily constitute satisfaction of all federal requirements nor eliminate the need for approval by EPA in cases where specified criteria for determining equivalency have not been clearly identified in this section.

(5) The following equipment standards shall apply to process drains.

(A) If water seal controls, as defined in §115.140 (relating to Industrial Wastewater Definitions), are used:

(i) the use of VOC rather than water as the sealing liquid in a water seal is unacceptable; and

(ii) the process drain shall be equipped with:

(I) an alarm that alerts the operator if the water level in the vertical leg of the drain falls below 50% of the maximum level, and a device that continuously records the status of the water level alarm, including the time period for which the alarm has been activated; or

(II) a flow-monitoring device indicating either positive flow from a main to a branch water line supplying a trap or water being continuously dripped into the trap; and a device that continuously records the status of water flow into the trap.

(B) For process drains not equipped with water seal controls, the process drain shall be equipped with:

(i) a gasketed seal; or

(ii) a tightly-fitting cap or plug.

(6) Valves (other than pressure relief valves) on the shutdown list must be replaced at the next shutdown as follows.

(A) Each valve must be replaced with a:

(i) bellows valve; or

(ii) diaphragm valve.

(B) The executive director may approve valve designs different from those specified in subparagraph (A) of this paragraph. The executive director:

(i) shall consider on a case-by-case basis the technological circumstances of the individual valve;

(ii) must determine that the alternative valve design will result in the lowest emissions level that the valve is capable of meeting after the application of best available control technology; and

(iii) is the Engineering Services Team, Office of Compliance and Enforcement, for purposes of this section.

(C) Any person affected by the executive director's decision to deny a request for approval of an alternative valve design may file a motion for reconsideration. The requirements of §50.39 or §50.139 of this title apply. However, only a person affected may file a motion for reconsideration. Executive director approval does not necessarily constitute satisfaction of all federal requirements nor eliminate the need for approval by EPA in cases where specified criteria for determining equivalency have not been clearly identified in this section.

#### §115.784. Prevention Measures Procedures.

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

(1) Parallel service--Additional pressure relief devices which protect a common piece or pieces of equipment. These additional pressure relief devices may be installed as spares to facilitate maintenance or because the design relieving capacity cannot be obtained with a single pressure-relieving device. The pressure relief devices do not need to have the same pressure setting to be considered parallel.

(2) Pressure relief device--An automatic pressure-relieving device for discharges of volatile organic compounds (VOCs) which prevents safety hazards, prevents pressures from exceeding the maximum allowable working pressure of the operating process equipment, or prevents equipment damage. Such devices include, but are not limited to, pressure relief valves, emergency depressurizing vents, and rupture disks.

(3) Prevention measure--A reliable component, system, or program that will prevent a release event. Examples of prevention measures include, but are not limited to, flow, temperature, level, and pressure indicators with interlocks, deadman switches, monitors, or automatic actuators; documented and verified routine inspection and maintenance programs; inherent safer designs; and deluge systems. Operator training and documented and verified routine inspection and maintenance programs may count as only one of the three prevention measures required by subsection (b) of this section. A component, system, or program with a high probability for failure shall not be considered a prevention measure.

(4) Process hazards analysis--An organized effort to identify and analyze the significance of hazardous scenarios associated with a process or activity. For the purposes of this section, a process hazards analysis is used to pinpoint weaknesses in the design and operation of facilities that could lead to a release event and to provide the owner or operator with information to aid in making decisions for preventing such events.

(5) Qualified person--A person who is qualified to attest to the validity of the prevention measures procedures and who is a licensed professional engineer in the State of Texas with expertise in chemical, mechanical, or safety engineering.

(6) Release event--For the purposes of this section (relating to Prevention Measures Procedures), any release of VOC greater than ten pounds resulting from a pressure relief device opening to the atmosphere. These events do not include releases which are vented to a closed-vent system, control device, or recovery device that meets the requirements of §115.783(2) of this title (relating to Equipment Standards).

(7) Responsible manager--A person who is an employee of the owner or operator, who possesses sufficient corporate authority, and who is responsible for the management of the facility.

(b) Preventive measures procedures.

(1) The owner or operator shall comply with the following process safety requirements:

(A) explicitly establish training, equipment, inspection, maintenance, and monitoring levels such that the pressure relief device releases are minimized; and

(B) using a process hazards analysis, predict, plan, and implement either:

(i) at least three prevention measures for the release event before a pressure relief device will release; or

(ii) at least one prevention measure for the release event before a pressure relief device will release, provided that:

(I) the pressure relief device, including those in parallel service, are vented to a closed-vent system, control device, or recovery device that meets the requirements of §115.783(2) of this title; and

(II) the control system is properly sized per manufacturer's recommendations to handle the material from all devices it is intended to serve.

(2) The prevention measures must be:

(A) approved and signed by a qualified person and a responsible manager; and

(B) submitted for review and approval by the Engineering Services Team, Office of Compliance and Enforcement, to determine if the plan meets the requirements of paragraph (1) of this subsection.

(c) Release events. If a pressure relief device in VOC service, including those in parallel service, has one or more release events after December 31, 2002, then the following requirements apply.

(1) Within 30 days of the first release event from a pressure relief device, the owner or operator shall conduct an additional, separate process hazard analysis, meet the prevention measures procedures specified in subsection (b) of this section, and conduct a failure analysis of the incident, to prevent recurrence of similar incidents.

(2) The process hazard analysis shall include an evaluation of the cost-effectiveness and technical feasibility of control devices to remedy the incident. This evaluation of control devices shall include, but shall not be limited to, venting the pressure relief device that caused the release event to an existing control device.

(3) Within 15 days of the first release event, the owner or operator shall equip each pressure relief device of the unit with a tamperproof tell-tale indicator that will show that a release has occurred since the last inspection.

(4) Within one year of the second release event from a pressure relief device in VOC service on the same unit, including those in parallel service, the owner or operator shall vent all the pressure relief devices that vent the second release event, including those in parallel service, to a closed-vent system, control device, or recovery device that meets the requirements of §115.783(2) of this title. The control system shall be properly sized per manufacturer's recommendations to handle the material from all devices it is intended to serve.

(d) Reporting. A release event from a pressure relief device shall be reported on the next working day following the venting. In addition, the following information shall be submitted in writing to the Engineering Services Team, Office of Compliance and Enforcement, within 30 days following the release event:

(1) date, time, and duration of the release event in minutes;

(2) identification of the device by its unique permanent identification number as well as its name and service commonly referred to by the owner or operator. This identification number shall be used to refer to the pressure relief valve location. Records for each pressure relief valve shall refer to this identification number;

(3) type and size of device;

(4) type and amount of material released in pounds, accurate to two significant digits;

(5) necessary information and assumptions used to report the duration and amount released during the event;

(6) cause of the event;

(7) a schedule for action to prevent reoccurrence of the event; and

(8) results of the emissions measurement and inspection required by §115.781(e) of this title (relating to General Monitoring and Inspection Requirements).

§115.785. Testing Requirements.

The owner or operator shall perform testing to demonstrate compliance with §115.783(2) of this title (relating to Equipment Standards) using the test methods specified in §115.125 of this title (relating to Testing Requirements). The owner or operator is responsible for providing testing facilities and conducting the sampling and testing operations at his expense.

(1) The appropriate regional office shall be contacted as soon as testing is scheduled, but not less than 45 days prior to testing to schedule a pretest meeting. The notice shall include:

(A) the date for pretest meeting;

(B) the date the testing will occur;

(C) the name of the firm conducting testing;

(D) the type of testing equipment to be used; and

(E) the method or procedure to be used in testing.

(2) The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

(3) A written proposed description of any minor test method modifications allowed under §115.125(4) of this title shall be

made available to the regional office before the pretest meeting. The regional director or the manager of the Engineering Services Team, Office of Compliance and Enforcement, will approve or disapprove of any deviation from specified sampling procedures.

(4) The plant shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of a production rate shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. If the plant is unable to operate at maximum rates during testing, then future production rates may be limited to the rates established during testing. Additional stack testing may be required when higher production rates are achieved.

(5) The owner or operator shall furnish the Office of Compliance and Enforcement, the appropriate regional office, and any local air pollution control agency having jurisdiction a copy of the final sampling report within 60 days after sampling is completed.

§115.786. Recordkeeping Requirements.

(a) If using a flow indicator to comply with §115.783(1)(A) of this title (relating to Equipment Standards), the owner or operator shall:

(1) maintain hourly records of whether the flow indicator was operating and whether a diversion was detected at any time during the hour; and

(2) record all periods when:

(A) the vent stream is diverted from the control stream;

or

(B) the flow indicator is not operating.

(b) If securing the bypass line valve in the closed position to comply with §115.783(1)(B) of this title, the owner or operator shall:

(1) maintain a record that the monthly visual inspection of the seal or closure mechanism has been done;

(2) record the date and time of all periods when:

(A) the seal mechanism is broken;

(B) the bypass line valve position has changed; or

(C) the key for a lock-and-key type lock has been checked out; and

(3) maintain a record of each time the bypass line valve was opened, including:

(A) the date and time the valve was opened;

(B) the date and time the valve was closed;

(C) the reason(s) the valve was opened;

(D) the flow through the valve; and

(E) the resulting speciated emissions, including the basis for the emissions estimate.

(c) The owner or operator shall maintain records of the preventive measures procedures, process hazard analyses, and release events to demonstrate compliance with the requirements of §115.784 of this title (relating to Prevention Measures Procedures).

(d) Records of all non-repairable components subject to §115.782(e) of this title (relating to Procedures and Schedule for Leak Repair and Follow-up) shall be maintained and submitted quarterly to the Office of Compliance and Enforcement, the appropriate regional office, and any local air pollution control agency having jurisdiction. The report shall contain:

(1) the component identification code;

(2) the component type;

(3) the leak concentration measurement and date;

(4) the date of the last process unit turnaround; and

(5) the total number of non-repairable components awaiting repair.

(e) The owner or operator shall maintain and update at least once every 12 months a written or electronic database which contains, at a minimum, the following information for all components subject to this division (relating to Fugitive Emissions) (i.e., a master components list):

(1) the name of the unit where the component is located;

(2) the type of monitored component (e.g., valve or pump seal);

(3) the component identification code;

(4) type of service (gas/vapor; heavy liquid; or light liquid);

(5) the response factor for the material that the component contacts;

(6) if exempt, the specific rule citation under which the exemption is claimed; and

(7) for each valve which is classified as nonaccessible or unsafe to monitor, the reason(s) why the valve is so classified.

(f) The owner or operator shall maintain all records for at least five years and make them available for review upon request by authorized representatives of the executive director, EPA, or local air pollution control agencies with jurisdiction.

§115.787. Exemptions.

(a) Components which contact a process fluid that contains less than 1.0% highly-reactive volatile organic compounds by weight are exempt from the requirements of this division, except for §115.786(e) and (f) of this title (relating to Recordkeeping Requirements).

(b) Submerged pumps or sealless pumps (e.g., diaphragm, canned, or magnetic-driven pumps) are exempt from the shaft sealing system requirements of §115.783(4) of this title (relating to Equipment Standards).

(c) The following components are exempt from the requirements of this division:

(1) conservation vents or other devices on atmospheric storage tanks that are actuated either by a vacuum or a pressure of no more than 2.5 pounds per square inch gauge (psig);

(2) components in continuous vacuum service; and

(3) valves that are not externally regulated (such as in-line check valves).

§115.788. Audit Provisions.

(a) At least once every two calendar years, the owner or operator of the petroleum refinery; synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing process; or natural gas/gasoline processing operation shall retain the services of an independent third-party organization to conduct an audit of each unit subject to this division (relating to Fugitive Emissions), including:

(1) all components which:

(A) were not tagged, but which should have been tagged; or

(B) were not included in the list of components to be monitored (with a hydrocarbon gas analyzer) or visually inspected, but which should have been included on that list;

(2) the leak/no-leak status and measured volatile organic compound (VOC) concentration for all components for which monitoring (with a hydrocarbon gas analyzer) or visual inspection is required that monitoring period, as follows:

(A) the monitoring/inspection audit shall begin within seven days of the date that the owner or operator's contracted or usual monitoring service begins monitoring components for that monitoring period;

(B) the following graph shall be used to determine the number of components required to be monitored in the audit out of the total number of components in each unit which are required to be monitored by §115.781 of this title (relating to General Monitoring and Inspection Requirements), based on an average of the most recent four quarters; and

Figure: 30 TAC §115.788(a)(2)(B)

(C) the audit shall not include components which were included in either of the most recent two audits, unless unavoidable due to the shutdown of units not included in either of the most recent two audits, or for other reasons agreed upon in advance by the appropriate regional office and any local air pollution control agency having jurisdiction; and

(3) all data generated by monitoring technicians in the previous quarter. This shall include:

(A) a review of the number of components monitored per technician;

(B) a review of the time between monitoring events;

(C) identification of abnormal data patterns; and

(D) identification of any discrepancies between the data in the electronic database required by §115.356(1) of this title (relating to Monitoring and Recordkeeping Requirements) and the data in the datalogger and/or field notes of §115.354(10)(A) and (B) of this title (relating to Inspection Requirements), respectively.

(b) For purposes of this section, independent third-party organization means an organization in which the owner or operator (including any subsidiary, parent company, sister company, or joint venture) of the petroleum refinery; synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing process; or natural gas/gasoline processing operation has no ownership or other financial interest. If the owner or operator's routine monitoring is done by a contractor rather than by in-house monitoring, then the independent third-party organization must be a different contractor.

(c) The owner or operator shall submit notification to the appropriate regional office and any local air pollution control agency having jurisdiction as follows:

(1) verbal notification of the date that the independent third-party organization is scheduled to begin the audit at least 30 days prior to such date; and

(2) written notification within 15 days after the audit is completed.

(d) The owner or operator shall furnish the Office of Compliance and Enforcement, the appropriate regional office, and any local

air pollution control agency having jurisdiction a copy of the results of each audit within 30 days after completion of the audit, including:

(1) the number of components which were not tagged, but which should have been tagged;

(2) the number of components which were not included in the list of components to be monitored (with a hydrocarbon gas analyzer) or visually inspected, but which should have been included on that list;

(3) the number of components monitored, the number of leaking components, and the percentage of leaking components identified by the independent third-party organization and by the owner or operator's contracted or usual monitoring service in each of the following categories:

(A) valves (excluding pressure relief valves);

(B) pressure relief valves;

(C) pumps;

(D) compressors; and

(E) connectors; and

(4) a summary of the independent third-party organization's review of all data generated by monitoring technicians in the previous quarter by the owner or operator's contracted or usual monitoring service for each of the following categories:

(A) the number of components monitored per technician;

(B) the time between monitoring events, including identification of specific instances in which a monitoring technician recorded data faster than was physically possible due to the hydrocarbon gas analyzer response time and/or the time required for the technician to move to the next component; and

(C) identification of abnormal data patterns.

(e) Authorized representatives of the executive director, EPA, or any local air pollution control agency with jurisdiction may conduct an audit of the owner or operator's leak detection and repair program.

(1) The following terms, when used in this subsection, shall have the following meanings, unless the context clearly indicates otherwise. Additional definitions for terms used in this subsection are found in §§3.2, 101.1, and 115.10 of this title (relating to Definitions) and §115.784 of this title (relating to Prevention Measures Procedures).

(A) Liquid leak - The dripping of liquid VOC at the rate of more than three drops per minute.

(B) Major gas leak - As follows:

(i) for a pressure relief device (as defined in §115.784 of this title), the detection of gaseous VOC in excess of 200 parts per million by volume (ppmv) above background as methane; and

(ii) for any other component, the detection of gaseous VOC in excess of 10,000 ppmv above background as methane.

(C) Minor gas leak - For any component other than a pressure relief device, the detection of gaseous VOC in excess of 500 ppmv but not more than 10,000 ppmv above background as methane.

(2) Test Method 21 (40 CFR 60, Appendix A, (June 22, 1990)) shall be used to identify the background and VOC leaks. The hydrocarbon gas analyzer shall be calibrated with methane.

(3) Any major gas leak of over 50,000 ppmv or any liquid leak detected by an authorized representative of the executive director, EPA, or any local air pollution control agency with jurisdiction shall constitute a violation of this subsection.

(4) Any major gas leak detected by an authorized representative of the executive director, EPA, or any local air pollution control agency with jurisdiction within any continuous 24-hour period, and numbering in excess of the leak thresholds for that component in the following table, shall constitute a violation of this subsection. The maximum number of leaks shall be rounded up to the next integer, where required.

Figure: 30 TAC §115.788(e)(4)

§115.789. Counties and Compliance Schedules.

The owner or operator of each petroleum refinery; synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing process; or natural gas/gasoline processing operation in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall demonstrate compliance with the requirements of this division (relating to Fugitive Emissions) in accordance with the following schedule.

(1) The initial monitoring of all components for which monitoring is required under this division, but which were not required to be monitored under Subchapter D, Division 3 of this chapter (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas), shall occur as soon as practicable, but no later than December 31, 2003.

(2) All equipment upgrades required by §115.783 and §115.784 of this title (relating to Equipment Standards; and Prevention Measures Procedures) must be made at the next unit shutdown after December 31, 2002, but no later than March 31, 2007.

(3) The initial independent third-party audit required by §115.788 of this title (relating to Audit Provisions) shall be completed and the results of the audit submitted as soon as practicable, but no later than December 31, 2003.

(4) The testing required by §115.785 of this title (relating to Testing Requirements) shall be conducted as soon as practicable, but no later than December 31, 2003.

(5) The initial master components list required by §115.786(e) of this title (relating to Recordkeeping Requirements) shall be developed and made available upon request to the appropriate regional office and any local air pollution control agency having jurisdiction as soon as practicable, but no later than December 31, 2003.

(6) The initial prevention measures plan required by §115.784(b) of this title shall be submitted as soon as practicable, but no later than December 31, 2003.

(7) The initial additional round of third quarter monitoring required by §115.781(b)(6) of this title (relating to General Monitoring and Inspection Requirements) shall be completed as soon as practicable, but no later than September 30, 2003.

(8) The initial monitoring of pump seals and compressor seals using a leak definition of 500 parts per million by volume, as required by §115.781(b)(9) of this title, shall begin as soon as practicable, but no later than December 31, 2003.

(9) Adjustment of measured volatile organic compound concentration using the appropriate relative response factor, as required by §115.781(b)(10) of this title, shall begin as soon as practicable, but no later than December 31, 2003.

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

Filed with the Office of the Secretary of State on June 7, 2002.

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Stephanie Bergeron

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Texas Natural Resource Conservation Commission

Earliest possible date of adoption: July 21, 2002

For further information, please call: (512) 239-0348



## CHAPTER 117. CONTROL OF AIR POLLUTION FROM NITROGEN COMPOUNDS

The Texas Natural Resource Conservation Commission (TNRCC or commission) proposes amendments to §117.10, concerning Definitions; §§117.105 - 117.108, 117.113 - 117.116, 117.119, and 117.121, concerning Utility Electric Generation in Ozone Nonattainment Areas; §§117.131, 117.135, 117.138, 117.141, 117.143, and 117.149, concerning Utility Electric Generation in East and Central Texas; §§117.203, 117.205 - 117.207, 117.213 - 117.216, 117.219, 117.221, and 117.223, concerning Industrial, Commercial, and Institutional Sources in Ozone Nonattainment Areas; §§117.301, 117.309, 117.311, 117.313, 117.319, and 117.321, concerning Adipic Acid Production; §§117.401, 117.409, 117.411, 117.413, 117.419, and 117.421, concerning Nitric Acid Manufacturing - Ozone Nonattainment Areas; §§117.463, 117.465, and 117.467, concerning Water Heaters, Small Boilers, and Process Heaters; §§117.473, 117.475, 117.478, and 117.479, concerning Boilers, Process Heaters, and Stationary Engines and Gas Turbines at Minor Sources; and §§117.510, 117.512, 117.520, and 117.534, concerning Administrative Provisions; new §117.151 and §117.481, concerning Alternate Case Specific Specifications; the repeal of §117.104, concerning Gas-Fired Steam Generation, §117.540, concerning Phased Reasonably Available Control Technology (RACT), and §117.560, concerning Recission; and corresponding revisions to the state implementation plan (SIP). The commission is excluding the proposed new §117.135(2) and §117.475(i), concerning Emission Specifications, §117.151, and §117.481 from the SIP in order to simplify the approval process for alternative carbon monoxide (CO) or ammonia emission specifications, thereby eliminating the need for case specific SIP revisions by the EPA to complete the approval of an alternate CO or ammonia limit.

The proposed amendments to Chapter 117, concerning Control of Air Pollution from Nitrogen Compounds, and revisions to the SIP would improve implementation of the existing Chapter 117 by correcting typographical errors, updating cross-references, clarifying ambiguous language, adding flexibility, deleting obsolete language, and amending requirements to achieve the intended nitrogen oxides (NO<sub>x</sub>) emission reductions of the program.

The commission proposes these amendments to Chapter 117 and revisions to the SIP as essential components of, and consistent with, the SIP that Texas is required to develop under the Federal Clean Air Act (FCAA) Amendments of 1990 as codified in 42 United States Code (USC), §7410, to demonstrate attainment of the national ambient air quality standard (NAAQS) for ozone. In addition, 42 USC, §7502(a)(2), requires attainment as expeditiously as practicable, and 42 USC, §7511a(d), requires

Figure: 30 TAC §115.160(14)(D)

$$\text{Weighted average volatility} = \frac{\sum V_{p_i} \times (M_i / MW_i)}{\sum (M_i / MW_i)}$$

where:

$V_{p_i}$  = Vapor pressure of VOC component i

$M_i$  = Mass of VOC component i

$MW_i$  = Molecular weight of VOC component i

Figure: 30 TAC §115.782(e)(2)

Component	Total Number of Non-repairable Components Allowed (%)
Valves (Excluding Pressure Relief Valves)	0.5%
Pressure Relief Valves	1.0%
Pumps and Compressors	1.0%
Connectors	0.5%
All Other Components	0.5%

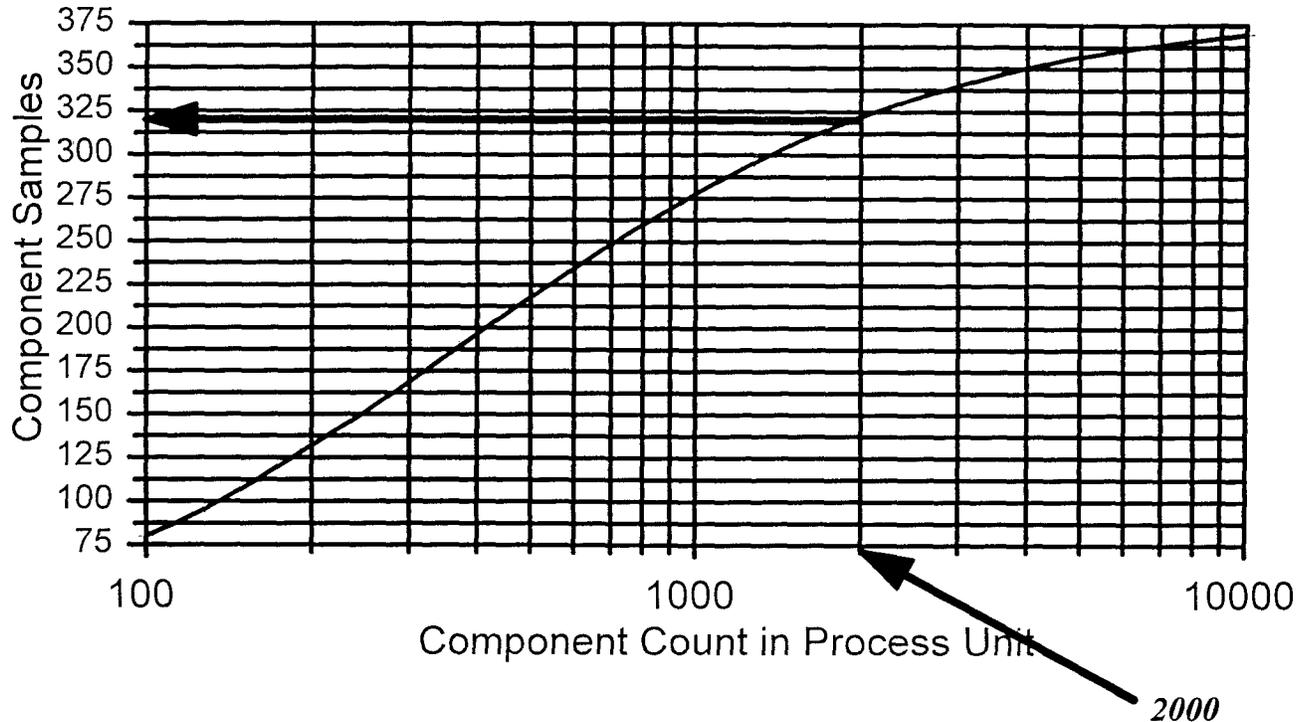
Figure: 30 TAC §115.782(e)(3)(B)

<b>Component</b>	<b>Mass Emission Standard (pound per day)</b>	<b>Total Number of Non-repairable Components Allowed (%)</b>
Valves (Excluding Pressure Relief Valves)	0.01	1.0%
Pressure Relief Valves	0.02	5.0%
Pumps and Compressors	0.02	5.0%
Connectors	0.01	1.0%
All Other Components	0.01	1.0%

Figure: 30 TAC §115.788(a)(2)(B)

## Minimum Sample Size for LDAR

95% Confidence Lvl 5% Confidence Int.



The x-axis represents the total number of components required to be monitored by §115.781 of this title (relating to General Monitoring and Inspection Requirements) in a unit, based on an average of the number of components required to be monitored in the four most recent quarters. The y-axis represents the minimum number of components required to be monitored in the audit to achieve a 95% confidence level with a 5% confidence interval.

The number of components to be monitored in the audit, as read from the graph, is rounded up to the next highest number on the y-axis which is divisible by 25. In the example shown, at least 325 components must be audited in a unit with 2,000 components. In another example, at least 175 components must be audited in a unit with 300 components.

In units with 100 or fewer components, all components in the unit must be audited.

In units with 10,000 or more components, at least 400 components in the unit must be audited.

Figure: 30 TAC §115.788(e)(4)

Component	Maximum Number of Leaks (200 or less components inspected)	Maximum Number of Leaks (over 200 components inspected)
Valves (Excluding Pressure Relief Devices)	1	0.5% of number inspected, or 25 (whichever is less)
Pumps	2	1.0% of number inspected, or 3 (whichever is less)
Compressors	1	1
Pressure Relief Devices	1	1
Connectors and Other Components	1	1