

The Texas Natural Resource Conservation Commission (commission) adopts amendments to Subchapter A, Definitions, §115.10; Subchapter B, General Volatile Organic Compound Sources, §§115.113, 115.116, 115.117, 115.132, 115.133, 115.136, 115.137, 115.139, 115.140, 115.145, 115.147, 115.153, 115.159, 115.161, and 115.169; Subchapter C, Volatile Organic Compound Transfer Operations, §115.214; Subchapter D, Petroleum Refining, Natural Gas Processing, and Petrochemical Processes, §§115.311 - 115.313, 115.316, 115.319, 115.322, 115.325 - 115.327, 115.352, 115.353, 115.355 - 115.357, and 115.359; Subchapter E, Solvent-Using Processes, §§115.420 - 115.422, 115.440, 115.442, 115.445, and 115.446; Subchapter F, Miscellaneous Industrial Sources, §§115.532, 115.533, 115.535, 115.539, 115.541 - 115.543, 115.545 - 115.547, 115.549, 115.552, and 115.559; and Subchapter J, Administrative Provisions, §§115.910 - 115.916, 115.920, 115.923, 115.930, 115.932, 115.934, and 115.940. These sections will be submitted to the United States Environmental Protection Agency (EPA) as revisions to the state implementation plan (SIP).

Sections 115.326, 115.355, 115.446, and 115.915 are adopted *with changes* to the proposed text as published in the January 4, 2002 issue of the *Texas Register* (27 TexReg 49). Sections 115.10, 115.113, 115.116, 115.117, 115.132, 115.133, 115.136, 115.137, 115.139, 115.140, 115.145, 115.147, 115.153, 115.159, 115.161, 115.169, 115.214, 115.311 - 115.313, 115.316, 115.319, 115.322, 115.325, 115.327, 115.352, 115.353, 115.356, 115.357, 115.359, 115.420 - 115.422, 115.440, 115.442, 115.445, 115.532, 115.533, 115.535, 115.539, 115.541 - 115.543, 115.545 - 115.547, 115.549, 115.552, 115.559, 115.910 - 115.914, 115.916, 115.920, 115.923, 115.930, 115.932, 115.934, and 115.940 are adopted *without changes* to the proposed text and will not be republished.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED RULES

The commission adopts these amendments to Chapter 115, Control of Air Pollution from Volatile Organic Compounds (VOC), and revisions to the SIP in order to make a variety of changes which clarify and add flexibility to existing requirements, correct technical and typographical errors, update references to terms, and delete redundant language.

SECTION BY SECTION DISCUSSION

Throughout this rulemaking the outdated term “undesigned head” is replaced with the proper term “division” in response to revised *Texas Register* rules published in the February 13, 1998 issue of the *Texas Register* (23 TexReg 1289). Also throughout the rulemaking, the term “Centigrade” is replaced with the term "Celsius" which is now the term commonly used to describe this temperature scale. In a separate rulemaking published in the July 16, 1999 issue of the *Texas Register* (24 TexReg 5490), the commission added a definition of vapor control system to §115.10 which is identical to the definition of vapor recovery system. This will facilitate a transition in the Chapter 115 rules to this term from the misleading term "vapor recovery system," which is defined to include both recovery and combustion control devices. Consequently, the adopted amendments also change references from “vapor recovery system” to “vapor control system” for clarification. Justification for these changes will not be discussed any further in this discussion other than to point out where each change has been made.

Additionally, formatting, punctuation, and other nonsubstantive corrections are made throughout the rulemaking as necessary. These corrections include the deletion of unnecessary section title references. These nonsubstantive corrections will not be discussed further.

Subchapter A, Definitions

The adopted amendment to §115.10, Definitions, revises the definition of marine terminal to clarify that both loading and unloading can occur at a marine terminal. This change is necessary for consistency with §115.214(a)(3)(B)(i) and (C), Inspection Requirements, which applies to unloading of VOC at marine terminals.

Subchapter B, General Volatile Organic Compound Sources

Division 1, Storage of Volatile Organic Compounds

The adopted amendments to §115.113, Alternate Control Requirements, incorporate Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties into subsection (a), now implied, and delete all of subsections (b) and (c) which currently contain the alternate control requirements for these nine counties. The amendments to §115.113 also revise the term “section” (which should have been “undesigned head”) to “division.” Finally, the amendments to §115.113 change “executive director” to lowercase for consistency with other divisions.

The adopted amendments to §115.116, Monitoring and Recordkeeping Requirements, abbreviate "EPA" because this term is defined in 30 TAC §3.2, Definitions, and delete the existing §115.116(a)(3)(D) and (b)(3)(D), which concern records associated with control device maintenance activities, because maintenance activities are already addressed in 30 TAC §101.7, Maintenance, Start-up and Shutdown Reporting, Recordkeeping, and Operational Requirements.

The adopted amendments to §115.117, Exemptions, revise the term “undesigned head” to “division,” spell out "pounds per square inch absolute" (psia), and add an exemption for storage containers which have a storage capacity of no more than 1,000 gallons for consistency with Tables I(a), I(b), and II(a) in §115.112, Control Requirements.

Subchapter B, General Volatile Organic Compound Sources

Division 3, Water Separation

The adopted amendments to §115.132, Control Requirements, update the old term “standard exemption” with the correct term “permit by rule” and correct the reference to the Chapter 106 title to “Permits by Rule.”

The adopted amendments to §115.133, Alternate Control Requirements, incorporate Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties into subsection (a), now implied, and delete all of subsections (b) and (c), which currently contain the alternate control requirements for these nine counties. The amendments to §115.133 also revise the term “section” (which should have been “undesigned head”) to “division.” Finally, the amendments to §115.133 change “executive director” to lower-case for consistency with other divisions.

The adopted amendments to §115.136, Monitoring and Recordkeeping Requirements, abbreviate "EPA" because this term is defined in §3.2, and delete the existing §115.136(a)(2)(D) and (b)(2)(D), which concern records associated with control device maintenance activities, because maintenance activities are already addressed in §101.7.

The adopted amendments to §115.137, Exemptions, revise the term “undesigned head” to “division,” spell out "pounds per square inch absolute," and change a reference from “vapor recovery system” to “vapor control system.”

The adopted amendment to §115.139, Counties and Compliance Schedule, revises the term “undesigned head” to “division.”

Subchapter B, General Volatile Organic Compound Sources

Division 4, Industrial Wastewater

The adopted amendment to §115.140, Industrial Wastewater Definitions, replaces "Texas Natural Resource Conservation Commission" with "commission" for consistency with the commission’s style guidelines.

The adopted amendments to §115.145, Approved Test Methods, correct a punctuation error and delete unnecessary section title references.

The adopted amendments to §115.147, Exemptions, correct the term “portion” to “division” and correct the formatting of the numerical number “10” to the term “ten.” The amendments to §115.147 also clarify the applicability of the exemption available under §115.147(3) by changing the reference to “the requirements of this division” to “the control requirements of §115.142.” This exemption was initially added to ensure that duplication of control requirements did not occur. However, the

exemption was not added to make the rule less stringent than control requirements that were already in place (i.e., the VOC/water separator rules). The amendments clarify this intent.

Subchapter B, General Volatile Organic Compound Sources

Division 5, Municipal Solid Waste Landfills

The adopted amendment to §115.153, Alternate Control Methods, revises the term “undesigned head” to “division.”

The adopted amendments to §115.159, Counties and Compliance Schedule, revise the term “undesigned head” to “division” and revise the phrase "be in compliance" to "demonstrate compliance" to emphasize the testing, monitoring and recordkeeping, and determination of mass emissions and flow rates.

Subchapter B, General Volatile Organic Compound Sources

Division 6, Batch Processes

The adopted amendment to §115.161, Applicability, adds a reference to §115.167(2)(A). This revision is necessary to ensure that vent gas streams which are currently subject to the requirements of Subchapter B, General Volatile Organic Compound Sources, Division 2, Vent Gas Control, remain controlled under that division if they are not required to be controlled under §115.162, Control Requirements, because they qualify for the exemption under §115.167(2)(A).

The adopted amendment to §115.169, Counties and Compliance Schedule, revises the phrase "be in compliance" to "demonstrate compliance" to emphasize the testing, monitoring and recordkeeping, and determination of mass emissions and flow rates.

Subchapter C, Volatile Organic Compound Transfer Operations

Division 1, Loading and Unloading of Volatile Organic Compounds

The adopted amendments to §115.214, Inspection Requirements, add the phrase "to or from transport vessels" to the catchlines in subsections (a)(1) and (b)(1) to more accurately describe the requirements of these paragraphs. The amendments to §115.214 also correct a typographical error in §115.214(b)(1)(D)(ii) by changing a reference from §115.213(b) to §115.213(c).

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

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

The adopted amendments to §115.311, Emission Specifications, correct a typographical error in §115.311(a)(1) and (2) by changing references from §115.312(a) to §115.312(a)(2).

The adopted amendments to §115.312, Control Requirements, change "Centigrade" to "Celsius" in §115.312(a)(2)(A) and (b)(2)(A), and change "vapor recovery system" to "vapor control system" in §115.312(a)(2)(C) and (b)(2)(C). In addition, the amendments to §115.312 replace the phrase "volatile organic compound (VOC)" with the acronym "VOC" because this acronym was previously established within the section.

The adopted amendments to §115.313, Alternate Control Requirements, incorporate Gregg, Nueces, and Victoria Counties into subsection (a), now implied, and delete all of subsection (b), which currently contains the alternate control requirements for these three counties. The amendments to §115.313 also revise the term “undesignated head” to “division.”

The adopted amendments to §115.316, Monitoring and Recordkeeping Requirements, delete the existing §115.316(a)(1)(D) and (b)(1)(D), which concern records associated with control device maintenance activities, because maintenance activities are already addressed in §101.7. The amendments to §115.316 also update references from the "Texas Air Control Board" and “TACB” (one of the commission's predecessor agencies) to "executive director" for consistency with the commission's style guidelines and abbreviate "EPA" because this term is defined in §3.2, Definitions.

The adopted amendment to §115.319, Counties and Compliance Schedules, revises the term “undesignated head” to “division.”

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 adopted amendments to §115.322, Control Requirements, revise the phrase "safety pressure relief valves" in §115.322(4) to "pressure relief valves" for consistency with other sections in Chapter 115.

The amendments to §115.322 also revise §115.322(5), which requires that pipeline valves and pressure relief valves in gaseous VOC service be marked in some manner that will be readily obvious to monitoring personnel, by adding an option that the owner or operator may choose to monitor all

components in liquid service on the schedule for components in gaseous service specified in §115.324(2), Inspection Requirements. This option will result in more frequent monitoring of components in liquid service, but will add flexibility for owners or operators to be able to choose which option will be most efficient and effective for their refinery.

The adopted amendments to §115.325, Testing Requirements, change "Centigrade" to "Celsius" and spell out "American Petroleum Institute."

The adopted amendments to §115.326, Recordkeeping Requirements, spell out and acronym "parts per million by volume (ppmv)" and revise the recordkeeping requirements for consistency with the fugitive emissions monitoring program required by §115.324. Specifically, the amendments add requirements for keeping records of the date the component was monitored, the results of the monitoring (in ppmv), the test method used (Test Method 21, or sight/sound/smell), and the date on which a first attempt at repair was made to a leaking component. In the proposed language, the existing §115.326(2)(H) was to remain but be renumbered to become §115.326(2)(G)(v). However, in the January 4, 2002 issue of the *Texas Register* (27 TexReg 65), the existing language, "those leaks that cannot be repaired until turnaround," was incorrectly struck through as being deleted. A correction was published in the March 29, 2002 issue of the *Texas Register* (27 TexReg 2589). For clarity, this section is adopted with changes to indicate that the existing language is to remain as new §115.326(2)(G)(v).

The adopted amendments to §115.327, Exemptions, revise the term "these sections" (which should have been "this undesignated head") to "division" and spell out and acronym "pounds per square inch

absolute (psia)" and "centimeters (cm)." The amendments to §115.327 also correct the formatting of the numerical number "5" to the word "five."

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 adopted amendment to §115.352, Control Requirements, revises the phrase "safety pressure relief valves" in §115.322(4) to "pressure relief valves" for consistency with other sections in Chapter 115.

The adopted amendment to §115.353, Alternate Control Requirements, revises the term "undesignated head" to "division."

The adopted amendments to §115.355, Testing Requirements, revise the term "undesignated head" to "division," correct the title of the division, and spell out and acronym "American Petroleum Institute (API)." The commission proposed to include a reference in §115.355(1) to calibration at 500 ppmv for Test Method 21 but has determined to retain the current requirement for calibration at 10,000 ppmv because a leak is defined as 10,000 ppmv for certain components.

The adopted amendments to §115.356, Recordkeeping Requirements, revise the recordkeeping requirements for consistency with the fugitive emissions monitoring program required by §115.354 by adding a requirement for keeping records of the date on which a first attempt at repair was made to a

leaking component. The amendments to §115.356 also abbreviate "EPA" because this term is defined in §3.2.

The adopted amendments to §115.357, Exemptions, revise the term "undesignated head" to "division" in §115.357(2) and (6) - (8) and add the title of the division to §115.357(2). In addition, the amendments to §115.357 spell out and acronym "volatile organic compound (VOC)" and "parts per million by volume (ppmv)" and acronym the term "pounds per square inch absolute" as "psia."

The adopted amendments to §115.359, Counties and Compliance Schedules, add a reference to the division in place of a reference to the sections in the division for brevity and clarity, and replace language which is obsolete due to the passing of a November 15, 1996 compliance date with new language stating that all affected persons 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 Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas) as required by §115.930 (relating to Compliance Dates).

Subchapter E, Solvent-Using Processes

Division 2, Surface Coating Processes

The adopted amendments to Subchapter E include revising the subchapter title from "Solvent-Using Process" to "Solvent-Using Processes" in order to more accurately describe the contents of this subchapter.

The adopted amendments to §115.420, Surface Coating Definitions, add a definition of hydrocarbon-based cleaning solvent to §115.420(b)(1) which is consistent with the requirements for hydrocarbon-based cleaning solvents specified in Table 1 - Composition Requirements for Approved Cleaning Solvents of 40 Code of Federal Regulations (CFR) §63.744, Standards: Cleaning operations. The EPA's *Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations* (aerospace Control Techniques Guideline (CTG)) was the basis for the adoption of the aerospace coating requirements which were added to the Surface Coating Processes Division effective July 20, 2000, as published in the July 14, 2000 issue of the *Texas Register* (25 TexReg 6752). The July 2000 adopted rule language was based on rule language provided in the Aerospace Manufacturing and Rework Operations Model Rule, found in Appendix B of the aerospace CTG. In the aerospace CTG's model rule, however, hydrocarbon-based cleaning solvents specified in Table 1 of 40 CFR §63.744 were inadvertently not exempted from the housekeeping measures, thereby creating an inconsistency between the Chapter 115 aerospace rules and 40 CFR §63.744.

The adopted amendments to §115.420(b)(1) also renumber subsequent definitions to accommodate the new definition of "hydrocarbon-based cleaning solvent," correct the abbreviation for

"basecoat/clearcoat" in §115.420(b)(12)(B)(i), and correct the variable "i" to "e" in the first summation sign in the denominator of the definition of "VOC composite vapor pressure" in the renumbered §115.420(b)(1)(EEEE).

The adopted amendments to §115.421, Emission Specifications, revise §115.421(a)(11) to clarify that the exemption for separate coating formulations in volumes less than 50 gallons per year to a maximum of 200 gallons per year for all such formulations applies to the total usage of these coatings at the account. The amendments also clarify that the term "formulations" refers to coating formulations and clarify that the term "antique aerospace" refers to antique aerospace vehicles.

The adopted amendment to §115.422, Control Requirements, adds "hydrocarbon-based cleaning solvents" to the list of cleaning solvents that are exempt from the housekeeping measures for the reasons explained in the discussion of §115.420.

Subchapter E, Solvent-Using Processes

Division 4, Offset Lithographic Printing

The adopted amendment to §115.440, Offset Printing Definitions, adds a new §115.440(10) to define "VOC composite partial pressure," which is necessary due to the adopted new §115.442(1)(F)(iii).

The amendments to §115.442, Control Requirements, add a new §115.442(1)(F)(iii) to give an additional option for meeting VOC reduction requirements by using cleaning solutions with a VOC composite partial vapor pressure less than or equal to ten millimeters of mercury (mm Hg) at 20

degrees Celsius (68 degrees Fahrenheit). This revision is needed to provide additional flexibility in this rule to encourage the use of low vapor pressure cleaning solutions which have lower VOC emissions than conventional cleaning solutions. The amendments also spell out an acronym "parts per million by volume (ppmv)" in §115.442(2).

The adopted amendments to §115.445, Approved Test Methods, abbreviate "EPA" in §115.445(5) because this term is defined in §3.2, and add a needed section symbol for a federal regulation citation along with the effective date of October 18, 1983 for the federal regulations.

The adopted amendments to §115.446, Monitoring and Recordkeeping Requirements, revise the temperature monitoring device accuracy requirement in §115.446(1) to include an option that the accuracy be $\pm 1.0\%$ of the temperature being monitored. In response to comment, §115.446(3) was revised to clarify that the requirement that the dryer be maintained at negative pressure applies only when the press is operating. The amendments to §115.446 also revise §115.446(5) to add an option for the monitoring and recording of temperature readings with respect to fountain solutions. These revisions are needed to provide additional flexibility in the rule for consistency with the offset printing CTG and other federal guidance. In addition, the amendments to §115.446 change a reference from "§115.442(1)(A) - (D)" to "§115.442(1)(A), (C), or (D)" because §115.442(1)(B) does not include fountain solution refrigeration as an option. Also in response to comment, a reference in §115.446(6) was corrected from "continuous cleaning equipment" to "automatic cleaning equipment" for consistency with the terminology used in the offset printing industry.

Subchapter F, Miscellaneous Industrial Sources

Division 2, Pharmaceutical Manufacturing Facilities

The adopted amendments to §115.532, Control Requirements, update the old term “standard exemption” with the correct term “permit by rule” and correct the reference to the title of Chapter 106 to “Permits by Rule.”

The adopted amendments to §115.533, Alternate Control Requirements, incorporate Gregg, Nueces, and Victoria Counties into subsection (a), now implied, and delete all of subsection (b) which currently contains the alternate control requirements for these three counties. The amendments to §115.533 also revise the term “undesignated head” to “division.”

The adopted amendments to §115.535, Testing Requirements, revise the term “undesignated head” to “division.”

The adopted amendment to §115.539, Counties and Compliance Schedules, revises the term “undesignated head” to “division.”

Subchapter F, Miscellaneous Industrial Sources

Division 3, Degassing or Cleaning of Stationary, Marine, and Transport Vessels

The adopted amendments to §115.541, Emission Specifications, update references in §115.541(b) and (b)(5) to the definition of "marine vessel," which was previously relocated from §115.10 to §101.1.

The adopted amendment to §115.542, Control Requirements, corrects a reference in §115.542(b)(4) to reflect the common usage of the term "lower explosive limit (LEL)."

The adopted amendments to §115.543, Alternate Control Requirements, revise the term "undesignated head" to "division," and change "executive director" to lowercase for consistency with other divisions.

The adopted amendments to §115.545, Approved Test Methods, reference an additional vapor-tightness test available under 40 CFR §63.565(c). The inclusion of this second test method for determining marine vessel vapor tightness will provide additional flexibility. The amendments also add effective dates for the federal regulations cited.

The adopted amendments to §115.546, Monitoring and Recordkeeping Requirements, update a reference from the "Texas Natural Resource Conservation Commission" to "executive director" for consistency with the commission's style guidelines and abbreviate "EPA" because this term is defined in §3.2. The amendments to §115.546 also delete the existing §115.546(2)(D), which concerns records associated with control device maintenance activities, because maintenance activities are already addressed in §101.7 and add an effective date for the federal regulation cited.

The adopted amendments to §115.547, Exemptions, revise the term “undesigned head” to “division” in §115.547(1), (2), and (5), add the division title to the first reference to the division, add language necessary to complete the sentence in paragraph (3), and revise paragraph (4) by correcting a reference from §115.541(3) to §115.541(b).

The adopted amendments to §115.549, Counties and Compliance Schedules, delete an incorrect reference to "El Paso" in §115.549(a), revise the term “undesigned head” to “division,” and revise references to "Texas Natural Resource Conservation Commission" or "TNRCC" to "commission" for consistency with the commission’s style guidelines. The amendments to §115.549 also replace language in §115.549(a) which is obsolete due to the passing of a November 15, 1996 compliance date with new language stating that all affected persons in Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, and Waller Counties shall continue to comply with this division (relating to Degassing or Cleaning of Stationary, Marine, and Transport Vessels) as required by §115.930 (relating to Compliance Dates).

Subchapter F, Miscellaneous Industrial Sources

Division 4, Petroleum Dry Cleaning Systems

The adopted amendments to §115.552, Control Requirements, update the old term “standard exemption” with the correct term “permit by rule” and correct the reference to the title of Chapter 106 to “Permits by Rule.” In addition, the amendments to §115.552 correct the phrase “concerning” in §115.552(b)(1) to the phrase “relating to” for consistency with other divisions.

The adopted amendments to §115.559, Counties and Compliance Schedules, revise a reference from "Texas Natural Resource Conservation Commission" to "commission" for consistency with the commission's style guidelines, add a reference to the division in place of a reference to the sections in the division for brevity and clarity, and change "National Ambient Air Quality Standard" to lowercase for consistency with other divisions.

Subchapter J, Administrative Provisions

Division 1, Alternate Means of Control

The adopted amendments to §115.910, Availability of Alternate Means of Control, revise the term "undesignated head" to "division" and reference the division title, abbreviate "EPA" because this term is defined in §3.2, and correct references to titles of sections in Division 1.

The adopted amendments to §115.911, Criteria for Approval of Alternate Means of Control, delete an unnecessary reference to "Texas Natural Resource Conservation Commission" in §115.910(1), correct the formatting of section references in §115.910(6), delete unnecessary references to the title of Chapter 115 in §115.910(4) and (6), and revise references from "TNRCC" to "commission" in §115.910(10) for consistency with the commission's style guidelines.

The adopted amendments to §115.912, Calculations for Determining AMOC Reductions, revise the title of this section to "Calculations for Determining Alternate Means of Control Reductions" for consistency with the other section titles in Division 1. The amendments to §115.912 also spell out and acronym

"alternate means of control (AMOC)" in §115.912(a)(1), abbreviate this term in §115.912(b), and revise §115.912(c) by correcting a reference to the title of §115.911.

The adopted amendments to §115.913, Procedures for Alternate Means of Control Plan Submittal, abbreviate "EPA" because this term is defined in §3.2, and delete unnecessary references to "Texas Natural Resource Conservation Commission" or "TNRCC" in §115.913(a) and (b)(1) and (9).

The adopted amendments to §115.914, Procedures for Alternate Means of Control Plan Approval, abbreviate "EPA" because this term is defined in §3.2, revise references from "TNRCC" to "commission" in §115.914(8) for consistency with the commission's style guidelines, and delete unnecessary references to "Texas Natural Resource Conservation Commission" or "TNRCC."

The adopted amendments to §115.915, Public Notice Format, delete unnecessary references to "Texas Natural Resource Conservation Commission" or "TNRCC" in §115.915(a), (b)(7) and (11), and (c).

The amendments to §115.915 also abbreviate "EPA" in §115.915(b)(7) because this term is defined in §3.2, and revise references from "TNRCC" to "executive director" in §115.915(b)(1) and (c) for consistency with the commission's style guidelines. It has come to the commission's attention that a parentheses in §115.915(b)(7) was inadvertently proposed for deletion. The commission has corrected this error.

The adopted amendments to §115.916, Review of Approved Alternate Means of Control Plans and Termination of Alternate Means of Control Plans, revise the term "undesigned head" to "division,"

add the division title to the first reference to the division, and revise a reference from "TNRCC" to "executive director" in §115.916(d) for consistency with the commission's style guidelines. The amendments to §115.916 also add EPA and any local air pollution control agency having jurisdiction as entities to which a copy of an approved AMOC plan must be provided upon request. This is consistent with the underlying recordkeeping requirements of Chapter 115.

Subchapter J, Administrative Provisions

Division 2, Early Reductions

The adopted amendments to §115.920, Applicability, revise a reference from "Texas Natural Resource Conservation Commission (TNRCC)" to "executive director" for consistency with the commission's style guidelines, correct a referenced section title in §115.920(3), and spell out "Code of Federal Regulations."

The adopted amendments to §115.923, Documentation, revise the term "undesignated head" to "division" and reference the division title, delete an unnecessary reference to "TNRCC" in §115.923(b) for consistency with the commission's style guidelines.

Subchapter J, Administrative Provisions

Division 3, Compliance and Control Plan Requirements

The adopted amendments to §115.930, Compliance Dates, revise the term "undesignated head" to "division" for consistency with the commission's style guidelines.

The adopted amendments to §115.932, Control Plan Procedure, revise a reference from "Texas Natural Resource Conservation Commission (TNRCC)" to "executive director" for consistency with the commission's style guidelines, delete an unnecessary reference to the title of Chapter 115, and correct the term "regulation" to "chapter."

The adopted amendments to §115.934, Control Plan Deviation, update references from the "Texas Air Control Board" and "TACB" (one of the commission's predecessor agencies) to "executive director" for consistency with the commission's style guidelines, correct the term "regulation" to "chapter," and abbreviate "EPA" because this term is defined in §3.2.

The adopted amendment to §115.940, Equivalency Determination, abbreviates "EPA" because this term is defined in §3.2.

FINAL REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that this rulemaking is not subject to §2001.0025 because it does not meet the definition of a "major environmental rule" as defined in that statute.

"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.

This rulemaking is not a major environmental rule because its primary purpose is to clarify procedural and technical requirements for facilities subject to Chapter 115 rules. Specifically, the amended sections clarify and add flexibility to existing requirements, correct technical and typographical errors, update references to terms, delete redundant language, and ensure adequate recordkeeping to document compliance with the Chapter 115 fugitive monitoring programs. Also, the fiscal impacts associated with this rulemaking are not anticipated to be significant.

In addition, a regulatory impact analysis is not required because the adopted rules do not meet any of the four applicability criteria for requiring a regulatory analysis 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. This rulemaking does not exceed a standard set by federal law, and the adopted technical requirements are consistent with applicable federal standards. In addition, this rulemaking does not exceed an express requirement of state law and is not adopted solely under the general powers of the agency, but is specifically authorized by the provisions cited in the STATUTORY AUTHORITY section of this preamble. Finally, this rulemaking does not exceed a requirement of a delegation agreement or contract to implement a state and federal program. The commission invited public comment on the draft regulatory impact analysis determination, and no comments were received.

TAKINGS IMPACT ASSESSMENT

The commission evaluated this rulemaking action and performed an analysis of whether the adopted rules are subject to Texas Government Code, Chapter 2007. The primary purpose of the rulemaking is to revise specific rules in Chapter 115 to clarify and add flexibility to existing requirements, correct errors, update references, and delete redundant and obsolete language. Promulgation and enforcement of these adopted rules would be neither a statutory nor a constitutional taking because they do not affect private real property. Specifically, the adopted rules do not affect a landowner's rights in private real property because this rulemaking does not burden (constitutionally), nor restrict or limit the owner's right to property and reduce its value by 25% or more beyond that which would otherwise exist in the absence of the rules. Therefore, these adopted rules will not constitute a takings under Texas Government Code, Chapter 2007.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed these adopted rules and found that they are 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 Texas Coastal Management Program (CMP) be considered during the rulemaking process.

The commission prepared a preliminary consistency determination for the rulemaking pursuant to 31 TAC §505.22 and found the 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. 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. The commission invited public comment on the consistency of the rulemaking with the CMP, and no comments were received.

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.

HEARING AND COMMENTERS

A public hearing was offered in Austin, Texas on January 23, 2002, and the public comment period closed on January 23, 2002. Three commenters submitted testimony on the proposal. Dow Chemical Company (Dow); Graphic Arts Technical Foundation (GATF); and Sierra Club - Houston Regional Group (Sierra-Houston) supported the proposed revisions to Chapter 115, but suggested changes or clarifications.

RESPONSE TO COMMENT

Sierra-Houston supported the proposed revisions to the definition of marine terminal in §115.10(20).

The commission appreciates the support.

Sierra-Houston objected to the proposed deletion of §§115.116(a)(3)(D) and (b)(3)(D); 115.136(a)(2)(D) and (b)(2)(D); and 115.316(a)(1)(D) and (b)(1)(D), which currently requires records of the date and reason for any maintenance and repair of the required control devices and the estimated quantity and duration of VOC emissions during such activities. Sierra-Houston commented that while maintenance activities are already addressed in §101.7, these existing rules are more comprehensive than §101.7 and should be retained because they provide a clear record to inspectors of how control devices have been operating.

The commission made no changes in response to the comment. The commission believes that there are other more appropriate locations within the rules that already contain requirements concerning recordkeeping related to maintenance activities; for example, the maintenance rules in §101.7. In a separate rulemaking, the commission proposed revisions to the Chapter 101 upset and maintenance rules (Rule Log No. 2001-075-101-AI) to address the requirements of House Bill 2912, 77th Legislature, 2001 (see the April 26, 2002 issue of the *Texas Register* (27 TexReg 3475)). This rulemaking will provide an opportunity for comments on possible improvements to the maintenance activity requirements, including recordkeeping. The commission is also considering requiring that routine maintenance be incorporated into new source review permits in a separate

rulemaking (Rule Log No. 2001-043-116-AI). There is also a permit by rule, §106.263, that addresses routine maintenance activities.

Dow stated that a common control device is often used to control emissions from storage tanks, process vents, and VOC transfer operations and that it is not cost-effective for industry to comply with different monitoring requirements under two or more divisions within Chapter 115. Dow suggested that §115.116(a)(3) and (b)(3) be revised to include temperature monitoring of pressure swing adsorption (PSA) carbon adsorption systems as an alternative to monitoring VOC concentration. Dow recommended that the suggested changes for §115.116(a)(3) and (b)(3) also be made to §§115.126(1)(A), 115.136(a)(2) and (b)(2), 115.144(3), 115.166(1)(A), 115.216(1)(A), and 115.546(2) to ensure that the requirements of these rules are as consistent as possible for PSA units. In addition, Dow noted that §115.126(1)(C) and §115.216(1)(C) establish the requirements for maintaining records of appropriate operating parameters for control devices other than the common control devices (direct-flame incinerators, chillers, catalytic incinerators, carbon adsorption systems, flares, and vapor combustors) listed in §115.126(1)(A) and (B) and §115.216(1)(A) and (B). Dow suggested that similar language be added to §§115.116(a)(3) and (b)(3), 115.136(a)(2) and (b)(2), and 115.546(2).

No changes were proposed to §§115.126, 115.144, 115.166, and 115.216; therefore, the commission is prohibited by the Administrative Procedure Act (APA) from making any changes to these sections in the current rulemaking. However, the commission may evaluate the suggested changes in the future and, if appropriate, consider them for possible inclusion in future rulemaking.

In order for the consistency that the commenter desires to be put in place, specific requirements for flares and vapor combustors would have to be added to a number of sections, including some for which no changes were proposed and some which are currently open. However, the scope of the current rulemaking in the currently-open sections is limited to minor administrative and/or minor cleanup. Changes to add specific requirements for flares and vapor combustors cannot be made at this time since affected parties would not have had an opportunity for notice and comment on these potentially significant changes. Likewise, the commission believes that potential changes concerning PSA units would be best addressed comprehensively in the future. Therefore, the commission has made no changes in response to the comments.

Sierra-Houston supported the proposed revisions to §115.214(a)(1) and (b)(1) which clarify that transfer refers to both loading and unloading.

The commission appreciates the support.

Dow commented on §115.217 and suggested that an exemption from the vapor-tight testing requirements be provided for marine vessels certified to carry liquefied petroleum gas (LPG) by an appropriate regulatory body or agency (i.e., flag state, United States Coast Guard, classification society, etc.). Dow asserted that marine vessels that are suitable for carrying LPG will be essentially leak-free, because otherwise the vessel would be venting cargo as it sailed across the ocean, thereby having a cargo discrepancy as well as the possibility of a fire or explosion. Dow stated that if a vessel can carry LPG without annual vapor-tightness testing under §115.215(7), then the annual vapor-

tightness test should not be required if the vessel also carries other VOCs that do not meet the definition of LPG.

No changes were proposed to §115.217; therefore, the commission is prohibited by the APA from making any changes to this section in the current rulemaking since affected parties would not have had an opportunity for notice and comment. However, the commission may evaluate the suggested changes in the future and, if appropriate, consider them for possible inclusion in future rulemaking. It should be noted that the LPG exemption dates from 1972, and that a closer examination potentially could result in a conclusion that the exemption should be deleted, rather than expanded as Dow has suggested.

Sierra-Houston supported the proposed revisions to §115.326(2)(D) - (G) and §115.356(1)(G)(ii), which require more comprehensive documentation for the leak detection and repair programs.

The commission appreciates the support.

GATF commented on §115.446(3), which requires that a heatset offset printing press dryer be operated at a lower pressure than the press room air pressure such that the air flows into the dryer at all times, with an air flow direction measuring device used to demonstrate 100% capture efficiency. GATF stated that most dryers are equipped with an interlocking system that automatically shuts down the press if the dryer fails or malfunctions. GATF suggested that §115.446(3) be revised such that a dryer equipped with an interlock is considered to be in compliance with the air direction flow monitoring requirement

as well as the requirement for the dryer to be at negative pressure. GATF submitted a July 9, 1997 EPA letter from John Seitz, Director, Office of Air Quality Planning and Standards, to GATF which addresses capture efficiency at heatset offset printing presses.

Section 115.446(3) is included in the Chapter 115 offset printing rules to ensure that 100% of the emissions are captured and directed to the dryer. The commenter's suggested "interlock" language would simply confirm that the dryer is operating when the heatset press is in use, but would not ensure that the dryer is under negative pressure. The July 9, 1997 EPA letter states that the EPA's position is that *"if a heatset web offset dryer is operating at negative pressure, then all of the heatset web offset lithographic printing ink oils that are not retained in the substrate can be assumed to be captured in the dryer and available for delivery from the dryer to a control device."* (emphasis added) Consequently, it is clearly important to ensure that the dryer operates at a negative pressure.

The letter further states that the EPA's position is "that there is no need and no benefit in having heatset web offset lithographic printers conduct temporary total enclosure, or any other type of capture tests, to establish heatset web offset lithographic ink oil capture efficiency." The context of EPA's statement indicates that capture efficiency testing using either a temporary total enclosure or permanent total enclosure is not necessary, provided that the dryer operates at a negative pressure.

The air flow direction measuring device required by §115.446(3) provides a mechanism for demonstrating 100% capture efficiency without having to resort to the expense of conducting capture efficiency testing using either a temporary total enclosure or permanent total enclosure. For the reasons described earlier in the response to GATF's comment, the commission believes that it is appropriate to retain the requirement for using an air flow direction measuring device to demonstrate 100% capture efficiency. However, as currently written, §115.446(3) could be misinterpreted to mean that the dryer must be at negative pressure even when the press is not operating. Therefore, the commission has revised §115.446(3) to clarify that the requirement that the dryer be maintained at negative pressure applies only when the press is operating.

GATF commented on §115.446(6), which requires flow meters for offset printing presses equipped with continuous cleaning equipment, and stated that automatic cleaning systems do not continuously clean the blankets or rollers. GATF suggested that §115.446(6) be revised to include a reference to the cleaning solution requirements of §115.442(1)(F).

The requirements of §115.442(1)(F) apply in addition to the requirements of §115.446(6). Consequently, there is no reason to add the suggested reference. However, the commission has corrected §115.446(6) to refer to "automatic cleaning equipment" rather than "continuous cleaning equipment" for consistency with the terminology used in the offset printing industry.

SUBCHAPTER A: DEFINITIONS

§115.10

STATUTORY AUTHORITY

The amendment is adopted under Texas Water Code (TWC), §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, Texas Clean Air Act (TCAA), §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

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

(1) **Beaumont/Port Arthur area** - Hardin, Jefferson, and Orange Counties.

(2) **Capture efficiency** - The amount of 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.

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

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

(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.

(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.

(7) **Dallas/Fort Worth area** - Collin, Dallas, Denton, and Tarrant Counties.

(8) **El Paso area** - El Paso County.

(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.

(10) **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.

(11) **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.

(12) **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.

(13) **Houston/Galveston area** - Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties.

(14) **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.

(15) **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.

(17) **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 seated 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.

(18) **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.

(19) **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.

(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.

(21) **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.

(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.

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

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

(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 (effective October 18, 1983).

(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.

(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.

(28) **True partial pressure** - The absolute aggregate partial pressure (psia) of all VOC in a gas stream.

(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.

(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.

(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.

(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."

SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES

DIVISION 1: STORAGE OF VOLATILE ORGANIC COMPOUNDS

§§115.113, 115.116, 115.117

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.113. Alternate Control Requirements.

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

§115.116. Monitoring and Recordkeeping Requirements.

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

(1) The owner or operator of any storage vessel with an external floating roof which is exempted from the requirement for a secondary seal as specified in §115.117(a)(1), (6), and (7) of this title (relating to Exemptions) and used to store volatile organic compounds (VOC) with a true vapor pressure greater than 1.0 psia (6.9 kPa) at storage conditions shall maintain records of the type of VOC stored and the average monthly true vapor pressure of the stored liquid.

(2) The results of inspections required by §115.114(a) of this title (relating to Inspection Requirements) shall be recorded. For secondary seal gaps that are required to be physically measured during inspection, these records shall include a calculation of emissions for all secondary seal gaps that exceed 1/8 inch (0.32 cm) where the accumulated area of such gaps is greater than 1.0 square inch per foot (21 square centimeters per meter) of tank diameter. These calculated emissions (Tr) shall be reported in the annual emissions inventory submittal required by §101.10 of this title (relating to Emissions Inventory Requirements). The emissions shall be calculated using the following methodology:

(A) Allowable Seal Gap (greater than 1/8 inch wide): A_s (square inches) = 1 square inch per tank diameter foot x tank diameter.

(B) Measured Seal Gap: M_s (square inches).

(C) Reportable Seal Gap Area: $R_s = M_s - A_s$ in square inches.

(D) Reportable Seal Gap/Allowable Ratio: $RR_s = R_s$ divided by A_s .

(E) Tank Circumference: T_c (feet).

(F) Reportable Seal Gap Length (total linear feet of seal gap greater than 1/8 inch gap width): R_l .

(G) Reportable Seal Gap Length/Tank Circumference Ratio: $RR_l = R_l/T_c$.

(H) Tank Emissions (with good single seal): $T_s = AP-42$ Calculation (convert to pounds/day).

(I) Tank Emissions (with two good seals): $T_{ss} = AP-42$ Calculation (convert to pounds/day). Note: Use maximum local monthly average ambient temperature as reported by the National Weather Service to calculate true vapor pressure.

(J) Reportable emissions: T_r (pounds) = $(T_s - T_{ss}) \times RR_s \times RR_l \times 90$ days.

Note: In no case should T_r be greater than $(T_s - T_{ss})$.

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

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

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

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

(4) The results of any testing conducted in accordance with the provisions specified in §115.115(a) of this title (relating to Testing Requirements) shall be maintained at an affected facility.

(5) All records shall be maintained for two years and be made available for review upon request by authorized representatives of the executive director, EPA, or local air pollution control agencies.

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

(1) The owner or operator of any storage vessel with an external floating roof which is exempted from the requirement for a secondary seal as specified in §115.117(b)(1), (6), and (7) of this title and used to store VOC with a true vapor pressure greater than 1.0 psia (6.9 kPa) at storage conditions shall maintain records of the type of VOC stored and the average monthly true vapor pressure of the stored liquid.

(2) The results of inspections required by §115.114(b) of this title shall be recorded.

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

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

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

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

(4) The results of any testing conducted in accordance with the provisions specified in §115.115(b) of this title shall be maintained at an affected facility.

(5) All records shall be maintained for two years and be made available for review upon request by authorized representatives of the executive director, EPA, or local air pollution control agencies.

§115.117. Exemptions.

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

(1) Except as provided in §115.116 of this title (relating to Monitoring and Recordkeeping Requirements), any volatile organic compound (VOC) with a true vapor pressure less than 1.5 pounds per square inch absolute (psia) (10.3 kPa) at storage conditions is exempt from the requirements of this division (relating to the Storage of Volatile Organic Compounds).

(2) Crude oil and condensate stored in tanks with a nominal capacity less than 210,000 gallons (794,850 liters), prior to custody transfer, is exempt from the requirements of this division.

(3) Storage containers which have a capacity of less than 25,000 gallons (94,625 liters) located at motor vehicle fuel dispensing facilities are exempt from the requirements of this division.

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

(5) External floating roof tanks storing waxy, high pour point crude oils are exempt from any secondary seal requirements of §115.112(a) of this title (relating to Control Requirements).

(6) Any welded tank storing VOC having a true vapor pressure less than 4.0 psia (27.6 kPa) is exempt from any external floating roof secondary seal requirement if any of the following types of primary seals have been installed before August 22, 1980:

(A) a mechanical shoe seal;

(B) a liquid-mounted foam seal; or

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

(7) Any welded tank storing crude oil having a true vapor pressure equal to or greater than 4.0 psia (27.6 kPa) and less than 6.0 psia (41.4 kPa) at storage conditions is exempt from any external floating roof secondary seal requirement if any of the following types of primary seals have been installed before December 10, 1982:

(A) a mechanical shoe seal;

(B) a liquid-mounted foam seal; or

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

(8) Storage containers which have a capacity of no more than 1,000 gallons are exempt from the requirements of this division.

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

(1) Except as provided in §115.116 of this title, any VOC with a true vapor pressure less than 1.5 psia (10.3 kPa) at storage conditions is exempt from the requirements of this division.

(2) Crude oil and condensate stored in tanks with a nominal capacity less than 210,000 gallons (794,850 liters), prior to custody transfer, is exempt from the requirements of this division.

(3) Storage containers which have a capacity of less than 25,000 gallons (94,625 liters) located at motor vehicle fuel dispensing facilities are exempt from the requirements of this division.

(4) A welded tank with a mechanical shoe primary seal which has a secondary seal from the top of the shoe seal to the tank wall (a shoe-mounted secondary seal) is exempt from the

requirement for retrofitting with a rim-mounted secondary seal if the shoe-mounted secondary seal was installed or scheduled for installation before August 22, 1980.

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

(6) Any welded tank storing VOC having a true vapor pressure less than 4.0 psia (27.6 kPa) is exempt from any external secondary seal requirement if any of the following types of primary seals have been installed before August 22, 1980:

(A) a mechanical shoe seal;

(B) a liquid-mounted foam seal; or

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

(7) Any welded tank storing crude oil having a true vapor pressure equal to or greater than 4.0 psia (27.6 kPa) and less than 6.0 psia (41.4 kPa) at storage conditions is exempt from any external secondary seal requirement if any of the following types of primary seals have been installed before December 10, 1982:

(A) a mechanical shoe seal;

(B) a liquid-mounted foam seal; or

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

(8) Storage containers which have a capacity of no more than 1,000 gallons are exempt from the requirements of this division.

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

(1) Any VOC with a true vapor pressure less than 1.5 psia (10.3 kPa) at storage conditions is exempt from the requirements of this division.

(2) Slotted sampling and gauge pipes installed in any floating roof storage tank are exempt from the provisions of §115.112(c) of this title.

(3) Storage tanks with nominal capacities between 1,000 gallons (3,785 liters) and 25,000 gallons (94,625 liters) are exempt from the requirements of §115.112(c)(1) of this title if construction began before May 12, 1973.

(4) Storage tanks with a nominal capacity of 420,000 gallons (1,589,700 liters) or less are exempt from the requirements of §115.112(c)(3) of this title.

(5) Storage containers which have a capacity of no more than 1,000 gallons are exempt from the requirements of this division.

SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES

DIVISION 3: WATER SEPARATION

§§115.132, 115.133, 115.136, 115.137, 115.139

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.132. Control Requirements.

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) the compartment is equipped with a floating roof or internal floating cover which will rest on the surface of the contents and be equipped with a closure seal or seals to close the space

between the roof or cover edge and tank wall. All gauging and sampling devices shall be vapor-tight except during gauging or sampling;

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

§115.133. Alternate Control Requirements.

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

§115.136. Monitoring and Recordkeeping Requirements.

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

(1) Any person who operates a single or multiple compartment volatile organic compound (VOC) water separator without the controls specified in §115.132(a) of this title (relating to Control Requirements) shall maintain complete and up-to-date records sufficient to demonstrate continuous compliance with the applicable exemption criteria including, but not limited to, the names

and true vapor pressures of all such materials stored, processed, or handled at the affected property, and any other necessary operational information.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

§115.137. Exemptions.

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

(1) Any volatile organic compound (VOC) water separator used exclusively in conjunction with the production of crude oil or condensate is exempt from §115.132(a) of this title (relating to Control Requirements) if the emissions from the separator have a combined weight of VOC equal to or less than 100 pounds (45.4 kg) in any continuous 24-hour period. When emissions from

multiple sources (including, but not limited to, VOC water separators, treaters, storage tanks, and saltwater disposal tanks) are routed through a common vent, the calculation of VOC emissions for purposes of this exemption shall be based upon the total of all emission sources which are routed to the common vent. It is unacceptable to disconnect any of the multiple sources routed through a common vent for purposes of complying with this exemption.

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

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

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

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

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

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

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

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

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

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

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

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

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

§115.139. Counties and Compliance Schedules.

All affected persons in Aransas, Bexar, Brazoria, Calhoun, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Gregg, Hardin, Harris, Jefferson, Liberty, Matagorda, Montgomery, Nueces, Orange, San Patricio, Tarrant, Travis, Victoria, and Waller Counties shall continue to comply with this division (relating to Water Separation) as required by §115.930 of this title (relating to Compliance Dates).

SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES

DIVISION 4: INDUSTRIAL WASTEWATER

§§115.140, 115.145, 115.147

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.140. Industrial Wastewater Definitions.

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

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

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

(B) pesticides manufacturing industry under SIC code 2879;

(C) petroleum refining industry under SIC code 2911;

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

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

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

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

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

(5) **Properly operated biotreatment unit** - A suspended growth process that generates biomass and recycles biomass to maintain biomass concentrations in the treatment unit. The average concentration of suspended biomass maintained in the aeration basin of a properly operated biotreatment unit shall equal or exceed 1.0 kilogram per cubic meter (kg/m^3), measured as total suspended solids.

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

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

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

§115.145. Approved Test Methods.

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

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

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

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

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

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

(3) Performance requirements for flares and vapor combustors.

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

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

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

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

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

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

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

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

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

(B) for the owner or operator that can identify at least 90% by weight of the VOCs in the wastewater stream, the individual VOCs that are 5.0% by weight or greater are required to be included on the list. If less than half of the total VOCs in the wastewater are represented by the compounds that are 5.0% by weight or greater, the owner or operator shall include those individual

VOCs with the greatest mass on the stream-specific list of VOCs until 75 compounds or every compound, whichever is fewer, is included on the list, except as provided by subparagraph (A) of this paragraph. The owner or operator shall document that the site-specific list of VOCs is representative of the process wastewater stream; and

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

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

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

§115.147. Exemptions.

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

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

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

(3) Unless specifically required by this division (relating to Industrial Wastewater), any 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.

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

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

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

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

(A) Petroleum refineries are exempt from the requirement in §115.142 of this title that after December 31, 2002, the control requirements apply from the point of generation of an affected VOC wastewater stream until the affected VOC wastewater stream is either returned to a process unit, or is treated to reduce the VOC content of the wastewater stream by 90% by weight and also reduce the VOC content of the same VOC wastewater stream to less than 1,000 parts per million by weight, provided that petroleum refineries continue to apply the requirement in §115.142 of this title

that the control requirements apply from the point of generation of an affected VOC wastewater stream until the affected VOC wastewater stream is either returned to a process unit, or is treated to remove VOC so that the wastewater stream no longer meets the definition of an affected VOC wastewater stream.

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

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

SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES

DIVISION 5: MUNICIPAL SOLID WASTE LANDFILLS

§115.153, §115.159

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.153. Alternate Control Requirements.

For all persons in the Houston/Galveston, El Paso, and Dallas/Fort Worth ozone nonattainment areas, alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division (relating to Municipal Solid Waste Landfills) may be approved by the executive director in accordance with §115.910 of this title (relating to

Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.

§115.159. Counties and Compliance Schedule.

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

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

(c) All affected MSWLFs in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall demonstrate compliance with this division as soon as practicable, but no later than one year, after the commission publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the National Ambient Air Quality Standard (NAAQS) for ozone by the attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the Federal Clean Air Act (FCAA), §172(c)(9).

SUBCHAPTER B: GENERAL VOLATILE ORGANIC COMPOUND SOURCES

DIVISION 6: BATCH PROCESSES

§115.161, §115.169

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.161. Applicability.

(a) The provisions of §§115.162 - 115.167 of this title (relating to Control Requirements; Alternate Control Requirements; Determination of Emissions and Flow Rates; Approved Test Methods and Testing Requirements; Monitoring and Recordkeeping Requirements; and Exemptions) apply to vent gas streams at batch process operations in the Beaumont/Port Arthur and Houston/Galveston areas,

as defined in §115.10 of this title (relating to Definitions), under the following Standard Industrial Classification (SIC) codes:

- (1) 2821 (plastic resins and materials);
- (2) 2833 (medicinals and botanicals);
- (3) 2834 (pharmaceutical preparations);
- (4) 2861 (gum and wood chemicals);
- (5) 2865 (cyclic crudes and intermediates);
- (6) 2869 (industrial organic chemicals, not elsewhere classified); and
- (7) 2879 (agricultural chemicals, not elsewhere classified).

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

§115.169. Counties and Compliance Schedules.

(a) The owner or operator of each batch process operation in Hardin, Jefferson, and Orange Counties shall demonstrate compliance with this division (relating to Batch Processes) as soon as practicable, but no later than December 31, 2001. All batch process operations subject to this division in Hardin, Jefferson, and Orange Counties shall continue to comply with the requirements of Division 2 of this subchapter (relating to Vent Gas Control) until these batch process operations are in compliance with the requirements of this division.

(b) The owner or operator of each batch process operation in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall demonstrate compliance with this division (relating to Batch Processes) as soon as practicable, but no later than December 31, 2002. All batch process operations subject to this division in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall continue to comply with the requirements of Division 2 of this subchapter (relating to Vent Gas Control) until these batch process operations are in compliance with the requirements of this division.

SUBCHAPTER C: VOLATILE ORGANIC COMPOUND TRANSFER OPERATIONS

DIVISION 1: LOADING AND UNLOADING OF VOLATILE ORGANIC COMPOUNDS

§115.214

STATUTORY AUTHORITY

The amendment is adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.214. Inspection Requirements.

(a) The owner or operator of each volatile organic compound (VOC) transfer operation in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas shall comply with the following inspection requirements.

- (1) Land-based VOC transfer to or from transport vessels.

(A) During each VOC transfer, the owner or operator of the transfer operation or of the transport vessel shall inspect for:

(i) visible liquid leaks;

(ii) visible fumes; and

(iii) significant odors.

(B) VOC loading or unloading through the affected transfer lines shall be discontinued immediately when a leak is observed and shall not be resumed until the observed leak is repaired.

(C) All tank-truck tanks being filled with or emptied of gasoline, or being filled with non-gasoline VOC having a true vapor pressure greater than or equal to 0.5 pounds per square inch absolute under actual storage conditions, shall have been leak tested within one year in accordance with the requirements of §§115.234 - 115.237 of this title (relating to Control of Volatile Organic Compound Leaks From Transport Vessels) as evidenced by prominently displayed certification affixed near the United States Department of Transportation certification plate.

(D) Subparagraphs (A) and (B) of this paragraph do not apply to fumes from hatches or vents if the fumes result from:

(i) a VOC transfer which is exempt from §115.211 or §115.212(a)(1) of this title (relating to Emission Specifications; and Control Requirements) under §115.217(a) of this title (relating to Exemptions); or

(ii) a VOC loading operation which, under the 90% control option in §115.213(b) of this title (relating to Alternate Control Requirements), is not required to control vapors caused by loading VOC.

(2) Gasoline terminals-additional inspection. The owner or operator of each gasoline terminal shall perform a monthly leak inspection of all equipment in gasoline service. Each piece of equipment shall be inspected during the loading of gasoline tank-trucks. For this inspection, detection methods incorporating sight, sound, and smell are acceptable. Alternatively, a hydrocarbon gas analyzer may be used for the detection of leaks, by meeting the requirements of §§115.352 - 115.357 of this title (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas). Every reasonable effort shall be made to repair or replace a leaking component within 15 days after a leak is found. If the repair or replacement of a leaking component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown.

(3) Marine terminals. For marine terminals in the Houston/Galveston area, the following inspection requirements apply.

(A) Before loading a marine vessel with a VOC which has a vapor pressure equal to or greater than 0.5 pounds per square inch absolute under actual storage conditions, the owner or operator of the marine terminal shall verify that the marine vessel has passed an annual vapor tightness test as specified in §115.215(7) of this title (relating to Approved Test Methods). If no documentation of the annual vapor tightness test is available, one of the following methods may be substituted.

(i) VOC shall be loaded into the marine vessel with the vessel product tank at negative gauge pressure.

(ii) Leak testing shall be performed during loading using Test Method 21. The testing shall be conducted during the final 20% of loading of each product tank of the marine vessel and shall be applied to any potential sources of vapor leaks on the vessel.

(iii) Documentation of leak testing conducted during the preceding 12 months as described in clause (ii) of this subparagraph shall be provided.

(B) During each VOC transfer, the owner or operator of the marine terminal or of the marine vessel shall inspect for:

(i) visible liquid leaks;

(ii) visible fumes; and

(iii) significant odors.

(C) If a liquid leak is detected during VOC transfer and cannot be repaired immediately (for example, by tightening a bolt or packing gland), then the transfer operation shall cease until the leak is repaired.

(D) If a vapor leak is detected by sight, sound, smell, or hydrocarbon gas analyzer during the VOC loading operation, then a "first attempt" shall be made to repair the leak. VOC loading operations need not be ceased if the first attempt to repair the leak, as defined in §101.1 of this title (relating to Definitions), to less than 10,000 parts per million by volume (ppmv) or 20% of the lower explosive limit, is not successful provided that the first attempt effort is documented by the owner or operator of the marine vessel as soon as practicable and a copy of the repair log made available to a representative of the marine terminal. No additional loadings shall be made into the cargo tank until a successful repair has been completed and an inspection conducted under 40 Code of Federal Regulations 61.304(f) or 63.565(c).

(E) The intentional bypassing of a vapor control device during marine loading operations is prohibited.

(F) All shore-based equipment is subject to the fugitive emissions monitoring requirements of §§115.352 - 115.357 of this title. For the purposes of this paragraph, shore-based equipment includes, but is not limited to, all equipment such as loading arms, pumps, meters, shutoff valves, relief valves, and other piping and valves between the marine loading facility and the vapor control system and between the marine loading facility and the associated land-based storage tanks, excluding working emissions from the storage tanks.

(G) Subparagraphs (B) and (D) of this paragraph do not apply to fumes from hatches or vents if the fumes result from:

(i) a VOC transfer which is exempt from §115.212(a)(6)(A) of this title under §115.217(a)(5) of this title; or

(ii) a VOC loading operation which, under the 90% control option in §115.213(d) of this title, is not required to control vapors caused by loading VOC.

(b) The owner or operator of each VOC transfer operation in the covered attainment counties shall comply with the following inspection requirements.

(1) Land-based VOC transfer to or from transport vessels. At all VOC transfer operations in Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties, and at gasoline terminals and gasoline bulk plants in the covered attainment counties:

(A) During each VOC transfer, the owner or operator of the transfer operation or of the transport vessel shall inspect for:

(i) visible liquid leaks;

(ii) visible fumes; and

(iii) significant odors.

(B) VOC loading or unloading through the affected transfer lines shall be discontinued immediately when a leak is observed and shall not be resumed until the observed leak is repaired.

(C) All tank-truck tanks being filled with or emptied of gasoline shall have been leak tested within one year in accordance with the requirements of §§115.234 - 115.237 of this title as evidenced by prominently displayed certification affixed near the United States Department of Transportation certification plate.

(D) Subparagraphs (A) and (B) of this paragraph do not apply to fumes from hatches or vents if the fumes result from:

(i) a VOC transfer which is exempt from §115.211 or §115.212(b)(1) of this title under §115.217(b) of this title; or

(ii) a VOC loading operation which, under the 90% control option in §115.213(c) of this title, is not required to control vapors caused by loading VOC.

(2) Gasoline terminals-additional inspection. The owner or operator of each gasoline terminal shall perform a monthly leak inspection of all equipment in gasoline service. Each piece of equipment shall be inspected during the loading of gasoline tank-trucks. For this inspection, detection methods incorporating sight, sound, and smell are acceptable. Alternatively, a hydrocarbon gas analyzer may be used for the detection of leaks, by meeting the requirements of §§115.352 - 115.357 of this title. Every reasonable effort shall be made to repair or replace a leaking component within 15 days after a leak is found. If the repair or replacement of a leaking component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown.

**SUBCHAPTER D: PETROLEUM REFINING, NATURAL GAS PROCESSING, AND
PETROCHEMICAL PROCESSES**

**DIVISION 1: PROCESS UNIT TURNAROUND AND VACUUM-PRODUCING SYSTEMS IN
PETROLEUM REFINERIES**

§§115.311 - 115.313, 115.316, 115.319

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.311. Emission Specifications.

(a) For all affected 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 on vacuum-producing systems shall apply.

(1) No person may be allowed to emit any volatile organic compound (VOC) from a steam ejector or mechanical vacuum pump in a petroleum refinery unless the vent stream is controlled properly in accordance with §115.312(a)(2) of this title (relating to Control Requirements).

(2) No person may be allowed to emit any VOC from a hotwell with a contact condenser unless the hotwell is covered and the vapors from the hotwell are controlled properly in accordance with §115.312(a)(2) of this title.

(b) For all affected persons in Gregg, Nueces, and Victoria Counties, the following emission specifications on vacuum-producing systems shall apply.

(1) No person may be allowed to emit any VOC from a steam ejector or mechanical vacuum pump in a petroleum refinery, unless the vent stream is controlled properly in accordance with §115.312(b)(2) of this title.

(2) No person may be allowed to emit any VOC from a hotwell with a contact condenser, unless the hotwell is covered and the vapors from the hotwell are controlled properly in accordance with §115.312(b)(2) of this title.

§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) recover and store all pumpable or drainable liquid; and

(B) reduce vessel gas pressure to 5.0 psig (34.5 kPa gauge) or less by recovery or combustion before venting to the atmosphere.

(2) Vent gas streams affected by §115.311(a) of this title (relating to Emission Specifications) must be controlled properly with a control efficiency of at least 90% 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 for combustion devices):

(A) in a direct-flame incinerator at a temperature equal to or greater than 1,300 degrees Fahrenheit (704 degrees Celsius);

(B) in a smokeless flare; or

(C) by any other vapor control system, as defined in §115.10 of this title
(relating to Definitions).

(b) For all affected persons in Gregg, Nueces, and Victoria Counties, the following control requirements shall apply.

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

(A) recover and store all pumpable or drainable liquid; and

(B) reduce vessel gas pressure to five psig (34.5 kPa gauge) or less by recovery or combustion before venting to the atmosphere.

(2) Vent gas streams affected by §115.311(b) of this title must be controlled properly with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices):

(A) in a direct-flame incinerator at a temperature equal to or greater than 1,300 degrees Fahrenheit (704 degrees Celsius);

(B) in a smokeless flare; or

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

§115.313. Alternate Control Requirements.

Alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements in this division (relating to Process Unit Turnaround and Vacuum-Producing Systems in Petroleum Refineries) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.

§115.316. Monitoring and Recordkeeping Requirements.

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

(1) Any person who operates a vacuum-producing system affected by §115.311(a) of this title (relating to Emission Specifications) shall keep the following records:

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

(B) continuous monitoring of temperatures upstream and downstream of a catalytic incinerator or chiller; and

(C) continuous monitoring of the exhaust gas volatile organic compound (VOC) concentration of any carbon adsorption system, as defined in §115.10 of this title (relating to Definitions), to determine breakthrough.

(2) Any person who conducts a process unit turnaround affected by §115.312(a) of this title (relating to Control Requirements) shall keep the following records:

(A) the date of process unit shutdown and subsequent start-up following turnaround;

(B) the type of process unit involved in the turnaround; and

(C) an estimation of the concentration and total emissions of VOC emissions released to the atmosphere during the process turnaround.

(3) The results of any testing conducted in accordance with the provisions specified in §115.315(a) of this title (relating to Testing Requirements) shall be maintained at the affected facility.

(4) All records shall be maintained for two years and be made available for review upon request by authorized representatives of the executive director, EPA, or local air pollution control agencies.

(b) For all affected persons in Victoria County, the following recordkeeping requirements shall apply.

(1) Any person who operates a vacuum-producing system affected by §115.311(b) of this title shall keep the following records:

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

(B) continuous monitoring of temperatures upstream and downstream of a catalytic incinerator or chiller; and

(C) continuous monitoring of the exhaust gas VOC concentration of any carbon adsorption system, as defined in §115.10 of this title, to determine breakthrough.

(2) Any person who conducts a process unit turnaround affected by §115.312(b) of this title shall keep the following records:

(A) the date of process unit shutdown and subsequent start-up following turnaround;

(B) the type of process unit involved in the turnaround; and

(C) an estimation of the concentration and total emissions of VOC emissions released to the atmosphere during the process turnaround.

(3) The results of any testing conducted in accordance with the provisions specified in §115.315(b) of this title shall be maintained at the affected facility.

(4) All records shall be maintained for two years and be made available for review upon request by authorized representatives of the executive director, EPA, or local air pollution control agencies.

§115.319. Counties and Compliance Schedules.

All affected persons 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 Process Unit Turnaround and Vacuum-Producing Systems in Petroleum Refineries) as required by §115.930 of this title (relating to Compliance Dates).

**SUBCHAPTER D: PETROLEUM REFINING, NATURAL GAS PROCESSING, AND
PETROCHEMICAL PROCESSES**

**DIVISION 2: FUGITIVE EMISSION CONTROL IN PETROLEUM REFINERIES
IN GREGG, NUECES, AND VICTORIA COUNTIES**

§§115.322, 115.325 - 115.327

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.322. Control Requirements.

For Gregg, Nueces, and Victoria Counties, no person shall operate a petroleum refinery without complying with the following requirements.

(1) No component shall be allowed to have a volatile organic compound (VOC) leak as defined in §101.1 of this title (relating to Definitions) for more than 15 calendar days after the leak is found, except as provided in paragraph (2) of this section.

(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, unless the repair of a 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. 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 scheduled shutdown.

(3) All leaking components, as defined in paragraph (1) of this section, which cannot be repaired until the unit is shut down for turnaround shall be identified for such repair by tagging. The executive director at his discretion may require early unit turnaround or other appropriate action based on the number and severity of tagged leaks awaiting turnaround.

(4) Except for pressure relief valves, no valves shall be installed or operated at the end of a pipe or line containing a VOC, unless the pipe or line is sealed with a second valve, a blind flange,

a 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) Pipeline valves and pressure relief valves in gaseous VOC service shall be marked in some manner that will be readily obvious to monitoring personnel. Alternatively, the owner or operator of the refinery may choose to monitor all components in liquid service on the schedule for components in gaseous service specified in §115.324(2) of this title (relating to Inspection Requirements).

§115.325. Testing Requirements.

For all affected persons in Gregg, Nueces, and Victoria Counties, compliance with this division (relating to Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties) shall be determined by applying the following test methods, as appropriate:

(1) Test Method 21 (40 CFR 60, Appendix A, effective 6/22/90) for determining volatile organic compound (VOC) leaks. The leak detection equipment can be calibrated with methane, propane, or hexane, but the meter readout must be as parts per million by volume (ppmv) hexane;

(2) determination of true vapor pressure using ASTM Test Method D323-82 for the measurement of Reid vapor pressure, adjusted for 68 degrees Fahrenheit (20 degrees Celsius) in accordance with American Petroleum Institute (API) Publication 2517, Third Edition, 1989; or

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

§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) Submit to the executive director a monitoring program plan. This plan shall contain, at a minimum, a list of the refinery units and the quarter in which they will be monitored, a copy of the log book format, and the make and model of the monitoring equipment to be used.

- (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) the name of the process unit where the component is located;

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

- (C) the tag number of the component;

(D) the date the component was monitored;

(E) the results of the monitoring (in ppmv);

(F) a record of the calibration of the monitoring instrument;

(G) if a component is found leaking:

(i) the date on which a leaking component is discovered;

(ii) the date on which a first attempt at repair was made to a leaking component;

(iii) the date on which a leaking component is repaired;

(iv) the date and instrument reading of the recheck procedure after a leaking component is repaired; and

(v) those leaks that cannot be repaired until turnaround;

(H) the total number of components checked and the total number of components found leaking; and

(I) the test method used (Test Method 21, or sight/sound/smell).

(3) Retain copies of the monitoring log for a minimum of two years after the date on which the record was made or the report prepared.

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

§115.327. Exemptions.

For all affected persons in Gregg, Nueces, and Victoria Counties, the following exemptions shall apply.

(1) Valves with a nominal size of two inches (five centimeters (cm)) or less are exempt from the requirements of this division (relating to Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties), provided allowable emissions at any refinery from sources affected by this division after controls are applied with exemptions will not exceed by more than 5.0% such allowable emissions with no exemptions. Any person claiming an exemption for valves two inches (five cm) nominal size or smaller under this section shall, at the time he provides his control plan, also provide the following information:

(A) identification of valves or classes of valves to be exempted;

(B) an estimate of uncontrolled emissions from exempted valves, and an estimate of emissions if controls were applied, plus an explanation of how the estimates were derived; and

(C) an estimate of the total volatile organic compound (VOC) emissions within the refinery from sources affected by §115.322 of this title (relating to Control Requirements), §115.324 of this title (relating to Inspection Requirements), and §115.326 of this title (relating to Recordkeeping Requirements) after controls are applied and assuming no exemptions for small valves, plus an explanation of how the estimate was derived.

(2) Components which contact a process fluid that contains less than 10% VOC by weight are exempt from the requirements of this division.

(3) Components which contact a process liquid containing a VOC having a true vapor pressure equal to or less than 0.147 pounds per square inch absolute (psia) (1.013 kPa) at 68 degrees Fahrenheit (20 degrees Celsius) are exempt from the requirements of §115.324 of this title if the components are inspected visually according to the inspection schedules specified within this same section.

(4) Petroleum refineries or individual process units in a temporary nonoperating status shall submit a plan for compliance with the provisions of this division, as soon as practicable, but no later than one month before the process unit is scheduled for start-up and be in compliance as soon as practicable, but no later than three months after start-up. All petroleum refineries affected by this section shall notify the executive director of any nonoperating refineries or individual process units when they are shut down and dates of any start-ups as they occur.

(5) Pressure relief devices connected to an operating flare header, components in continuous vacuum service, storage tank valves, and valves that are not externally regulated (such as in-line check valves) are exempt from the monitoring requirement of §115.324 of this title.

(6) Compressors in hydrogen service are exempt from the requirements of §115.324 of this title if the owner or operator demonstrates that the percent hydrogen content can be reasonably expected to always exceed 50% by volume.

**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

§§115.352, 115.353, 115.355 - 115.357, 115.359

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§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;

(B) a VOC concentration greater than 10,000 ppmv above background as methane, propane, or hexane, or the dripping or exuding of process fluid based on sight, smell, or sound for all pump seals and compressor seals.

(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, 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. 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.

(3) All leaking components, as defined in paragraph (1) of this section, which cannot be repaired until a unit shutdown shall be identified for such repair by tagging. The executive director, at his discretion, may require an early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting a unit shutdown.

(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, a 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) Construction of new and reworked piping, valves, and pump and compressor systems shall conform to applicable American National Standards Institute, American Petroleum Institute, American Society of Mechanical Engineers, or equivalent codes.

(6) New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.

(7) To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Valves elevated more than two meters above a support surface will be considered nonaccessible. Nonaccessible valves shall be identified in a list to be made available upon request.

(8) New and reworked piping connections shall be welded or flanged. 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 discs, a pressure gauge or an equivalent device or system shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs 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).

§115.353. Alternate Control Requirements.

For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, any alternate methods of demonstrating and documenting continuous

compliance with the applicable control requirements or exemption criteria in this division (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.

§115.355. Approved Test Methods.

For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, compliance with this division (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas) shall be determined by applying the following test methods, as appropriate:

- (1) Test Method 21 (40 CFR 60, Appendix A) for determining volatile organic compound leaks;
- (2) determination of true vapor pressure using American Society for Testing and Materials Test Methods D323-89, D2879, D4953, D5190, or D5191 for the measurement of Reid vapor pressure, adjusted for 68 degrees Fahrenheit (20 degrees Celsius) in accordance with American Petroleum Institute (API) Publication 2517, Third Edition, 1989;
- (3) minor modifications to these test methods approved by the executive director; or

(4) equivalent determinations using published vapor pressure data or accepted engineering calculations.

§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) the name of the process unit where the component is located;

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

(C) the tag number of the component;

(D) the date the component was monitored;

(E) the results of the monitoring (in parts per million by volume);

(F) a record of the calibration of the monitoring instrument;

(G) if a component is found leaking:

(i) the date on which a leaking component is discovered;

(ii) the date on which a first attempt at repair was made to a leaking component;

(iii) the date on which a leaking component is repaired;

(iv) the date and instrument reading of the recheck procedure after a leaking component is repaired; and

(v) those leaks that cannot be repaired until a unit shutdown;

(H) the total number of components checked and the total number of components found leaking; and

(I) the test method used (Test Method 21, or sight/sound/smell);

(2) records of the visual, audible, and olfactory inspections of flanges are not required unless a leak is detected; and

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

§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) Components which contact a process fluid containing volatile organic compounds (VOCs) having 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) are exempt from the requirements of §115.354 of this title (relating to Inspection Requirements) if the components are inspected visually according to the inspection schedules specified within this same section.

(2) Storage tank valves, pressure relief valves equipped with a rupture 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) Compressors in hydrogen service are exempt from the requirements of §115.354 of this title if the owner or operator demonstrates that the percent hydrogen content can be reasonably expected to always exceed 50.0% by volume.

(4) All pumps and compressors which are equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal are exempt from the monitoring requirement of §115.354 of this title. These seal systems may include, but are not limited to, dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned or magnetic driven pumps) may be used to satisfy the requirements of this paragraph.

(5) Reciprocating compressors and positive displacement pumps used in natural gas/gasoline processing operations.

(6) Components at a petroleum refinery; synthetic organic chemical, polymer, resin, or methyl-tert-butyl ether manufacturing process, which contact a process fluid that contains less than 10% VOC by weight and components at a natural gas/gasoline processing operation which contact a process fluid that contains less than 1.0% VOC by weight are exempt from the requirements of this division.

(7) Facilities with less than 250 components in VOC service are exempt from the requirements of this division.

(8) Components in ethylene, propane, or propylene service, not to exceed 5.0% of the total components, may be classified as non-repairable beyond the second repair attempt at 500 parts per million by volume (ppmv). These components will remain in the fugitive monitoring program and be repaired no later than 15 calendar days after the concentration of VOC detected via Test Method 21 exceeds 10,000 ppmv. For the purposes of this division, components which contact a process fluid with greater than 85% ethylene, propane, or propylene by weight are considered in ethylene, propane, or propylene service, respectively.

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

§115.359. Counties and Compliance Schedules.

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 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).

SUBCHAPTER E: SOLVENT-USING PROCESSES

DIVISION 2: SURFACE COATING PROCESSES

§§115.420 - 115.422

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§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 §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) **Aerosol coating (spray paint)** - A hand-held, pressurized, nonrefillable container that expels an adhesive or a coating in a finely divided spray when a valve on the container is depressed.

(2) **Coating** - A material applied onto or impregnated into a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealants, adhesives, thinners, diluents, inks, maskants, and temporary protective coatings.

(3) **Coating application system** - Devices or equipment designed for the purpose of applying a coating material to a surface. The devices may include, but are not be limited to, brushes, sprayers, flow coaters, dip tanks, rollers, knife coaters, and extrusion coaters.

(4) **Coating line** - An operation consisting of a series of one or more coating application systems and including associated flashoff area(s), drying area(s), and oven(s) wherein a surface coating is applied, dried, or cured.

(5) **Coating solids (or solids)** - The part of a coating that remains after the coating is dried or cured.

(6) **Daily weighted average** - The total weight of volatile organic compound (VOC) emissions from all coatings subject to the same emission standard in §115.421 of this title (relating to Emission Specifications), divided by the total volume of those coatings (minus water and exempt

solvent) delivered to the application system each day. Coatings subject to different emission standards in §115.421 of this title shall not be combined for purposes of calculating the daily weighted average. In addition, determination of compliance is based on each individual coating line.

(7) **High-volume low-pressure spray guns** - Equipment used to apply coatings by means of a spray gun which operates between 0.1 and 10.0 pounds per square inch gauge air pressure at the air cap.

(8) **Normally closed container** - A container that is closed unless an operator is actively engaged in activities such as adding or removing material.

(9) **Pounds of VOC per gallon of coating (minus water and exempt solvents)** - Basis for emission limits for surface coating processes. Can be calculated by the following equation:

Figure: 30 TAC §115.420(a)(9) (No change.)

$$\text{Pounds of VOC per gallon of coating (minus water and exempt solvents)} = \frac{W_v}{V_m - V_w - V_{es}}$$

Where:

- W_v = weight of VOC, in pounds, contained in V_m gallons of coating
- V_m = volume of coating, generally assumed to be one gallon
- V_w = volume of water, in gallons, contained in V_m gallons of coating
- V_{es} = volume of exempt solvents, in gallons, contained in V_m gallons of coating

(10) **Pounds of VOC per gallon of solids** - Basis for emission limits for surface

coating process. Can be calculated by the following equation:

Figure: 30 TAC §115.420(a)(10) (No change.)

$$\text{Pounds of VOC per gallon of solids} = \frac{W_v}{V_m - V_v - V_w - V_{es}}$$

Where:

W_v = weight of VOC, in pounds, contained in V_m gallons of coating

V_m = volume of coating, generally assumed to be one gallon

V_v = volume of VOC, in gallons, contained in V_m gallons of coating

V_w = volume of water, in gallons, contained in V_m gallons of coating

V_{es} = volume of exempt solvents, in gallons, contained in V_m gallons of coating

(11) **Spray gun** - A device that atomizes a coating or other material and projects the particulates or other material onto a substrate.

(12) **Surface coating processes** - Operations which utilize a coating application system.

(13) **Transfer efficiency** - The amount of coating solids deposited onto the surface of a part or product divided by the total amount of coating solids delivered to the coating application system.

(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) **Aerospace coating.**

(A) **Ablative coating** - A coating that chars when exposed to open flame or extreme temperatures, as would occur during the failure of an engine casing or during aerodynamic heating. The ablative char surface serves as an insulative barrier, protecting adjacent components from the heat or open flame.

(B) **Adhesion promoter** - A very thin coating applied to a substrate to promote wetting and form a chemical bond with the subsequently applied material.

(C) **Adhesive bonding primer** - A primer applied in a thin film to aerospace components for the purpose of corrosion inhibition and increased adhesive bond strength by attachment. There are two categories of adhesive bonding primers: primers with a design cure at 250 degrees Fahrenheit or below and primers with a design cure above 250 degrees Fahrenheit.

(D) **Aerospace vehicle or component** - Any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft including but not limited to airplanes, helicopters, missiles, rockets, and space vehicles.

(E) **Aircraft fluid systems** - Those systems that handle hydraulic fluids, fuel, cooling fluids, or oils.

(F) **Aircraft transparency** - The aircraft windshield, canopy, passenger windows, lenses, and other components which are constructed of transparent materials.

(G) **Antichafe coating** - A coating applied to areas of moving aerospace components that may rub during normal operations or installation.

(H) **Antique aerospace vehicle or component** - An aerospace vehicle or component thereof that was built at least 30 years ago. An antique aerospace vehicle would not routinely be in commercial or military service in the capacity for which it was designed.

(I) **Aqueous cleaning solvent** - A solvent in which water is at least 80% by volume of the solvent as applied.

(J) **Bearing coating** - A coating applied to an antifriction bearing, a bearing housing, or the area adjacent to such a bearing in order to facilitate bearing function or to protect base material from excessive wear. A material shall not be classified as a bearing coating if it can also be classified as a dry lubricative material or a solid film lubricant.

(K) **Bonding maskant** - A temporary coating used to protect selected areas of aerospace parts from strong acid or alkaline solutions during processing for bonding.

(L) **Caulking and smoothing compounds** - Semi-solid materials which are applied by hand application methods and are used to aerodynamically smooth exterior vehicle surfaces or fill cavities such as bolt hole accesses. A material shall not be classified as a caulking and smoothing compound if it can also be classified as a sealant.

(M) **Chemical agent-resistant coating** - An exterior topcoat designed to withstand exposure to chemical warfare agents or the decontaminants used on these agents.

(N) **Chemical milling maskant** - A coating that is applied directly to aluminum components to protect surface areas when chemically milling the component with a Type I or II etchant. Type I chemical milling maskants are used with a Type I etchant and Type II chemical milling maskants are used with a Type II etchant. This definition does not include bonding maskants, critical use and line sealer maskants, and seal coat maskants. Additionally, maskants that must be used with a combination of Type I or II etchants and any of the above types of maskants (i.e., bonding, critical use and line sealer, and seal coat) are not included. Maskants that are defined as specialty coatings are not included under this definition.

(O) **Cleaning operation** - Spray-gun, hand-wipe, and flush cleaning operations.

(P) **Cleaning solvent** - A liquid material used for hand-wipe, spray gun, or flush cleaning. This definition does not include solutions that contain no VOC.

(Q) **Clear coating** - A transparent coating usually applied over a colored opaque coating, metallic substrate, or placard to give improved gloss and protection to the color coat.

(R) **Closed-cycle depainting system** - A dust free, automated process that removes permanent coating in small sections at a time, and maintains a continuous vacuum around the area(s) being depainted to capture emissions.

(S) **Coating operation** - Using a spray booth, tank, or other enclosure or any area (such as a hangar) for applying a single type of coating (e.g., primer); using the same spray booth for applying another type of coating (e.g., topcoat) constitutes a separate coating operation for which compliance determinations are performed separately.

(T) **Coating unit** - A series of one or more coating applicators and any associated drying area and/or oven wherein a coating is applied, dried, and/or cured. A coating unit ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating.

(U) **Commercial exterior aerodynamic structure primer** - A primer used on aerodynamic components and structures that protrude from the fuselage, such as wings and attached components, control surfaces, horizontal stabilizers, vertical fins, wing-to-body fairings, antennae, and landing gear and doors, for the purpose of extended corrosion protection and enhanced adhesion.

(V) **Commercial interior adhesive** - Materials used in the bonding of passenger cabin interior components. These components must meet the Federal Aviation Administration (FAA) fireworthiness requirements.

(W) **Compatible substrate primer** - Either compatible epoxy primer or adhesive primer. Compatible epoxy primer is primer that is compatible with the filled elastomeric coating and is epoxy based. The compatible substrate primer is an epoxy-polyamide primer used to promote adhesion of elastomeric coatings such as impact-resistant coatings. Adhesive primer is a coating that:

(i) inhibits corrosion and serves as a primer applied to bare metal surfaces or prior to adhesive application; or

(ii) is applied to surfaces that can be expected to contain fuel. Fuel tank coatings are excluded from this category.

(X) **Confined space** - A space that:

(i) is large enough and so configured that a person can bodily enter and perform assigned work;

(ii) has limited or restricted means for entry or exit (for example, fuel tanks, fuel vessels, and other spaces that have limited means of entry); and

(iii) is not suitable for continuous occupancy.

(Y) Corrosion prevention compound - A coating system or compound that provides corrosion protection by displacing water and penetrating mating surfaces, forming a protective barrier between the metal surface and moisture. Coatings containing oils or waxes are excluded from this category.

(Z) Critical use and line sealer maskant - A temporary coating, not covered under other maskant categories, used to protect selected areas of aerospace parts from strong acid or alkaline solutions such as those used in anodizing, plating, chemical milling and processing of magnesium, titanium, or high-strength steel, high-precision aluminum chemical milling of deep cuts, and aluminum chemical milling of complex shapes. Materials used for repairs or to bridge gaps left by scribing operations (i.e., line sealer) are also included in this category.

(AA) Cryogenic flexible primer - A primer designed to provide corrosion resistance, flexibility, and adhesion of subsequent coating systems when exposed to loads up to and surpassing the yield point of the substrate at cryogenic temperatures (-275 degrees Fahrenheit and below).

(BB) **Cryoprotective coating** - A coating that insulates cryogenic or subcooled surfaces to limit propellant boil-off, maintain structural integrity of metallic structures during ascent or re-entry, and prevent ice formation.

(CC) **Cyanoacrylate adhesive** - A fast-setting, single component adhesive that cures at room temperature. Also known as "super glue."

(DD) **Dry lubricative material** - A coating consisting of lauric acid, cetyl alcohol, waxes, or other noncross linked or resin-bound materials that act as a dry lubricant.

(EE) **Electric or radiation-effect coating** - A coating or coating system engineered to interact, through absorption or reflection, with specific regions of the electromagnetic energy spectrum, such as the ultraviolet, visible, infrared, or microwave regions. Uses include, but are not limited to, lightning strike protection, electromagnetic pulse (EMP) protection, and radar avoidance. Coatings that have been designated as "classified" by the Department of Defense are excluded.

(FF) **Electrostatic discharge and electromagnetic interference coating** - A coating applied to space vehicles, missiles, aircraft radomes, and helicopter blades to disperse static energy or reduce electromagnetic interference.

(GG) Elevated-temperature Skydrol-resistant commercial primer - A

primer applied primarily to commercial aircraft (or commercial aircraft adapted for military use) that must withstand immersion in phosphate-ester hydraulic fluid (Skydrol 500b or equivalent) at the elevated temperature of 150 degrees Fahrenheit for 1,000 hours.

(HH) Epoxy polyamide topcoat - A coating used where harder films are

required or in some areas where engraving is accomplished in camouflage colors.

(II) Fire-resistant (interior) coating - For civilian aircraft, fire-resistant

interior coatings are used on passenger cabin interior parts that are subject to the FAA fireworthiness requirements. For military aircraft, fire-resistant interior coatings are used on parts that are subject to the flammability requirements of MIL-STD-1630A and MIL-A-87721. For space applications, these coatings are used on parts that are subject to the flammability requirements of SE-R-0006 and SSP 30233.

(JJ) Flexible primer - A primer that meets flexibility requirements such as

those needed for adhesive bond primed fastener heads or on surfaces expected to contain fuel. The flexible coating is required because it provides a compatible, flexible substrate over bonded sheet rubber and rubber-type coatings as well as a flexible bridge between the fasteners, skin, and skin-to-skin joints on outer aircraft skins. This flexible bridge allows more topcoat flexibility around fasteners and decreases the chance of the topcoat cracking around the fasteners. The result is better corrosion resistance.

(KK) **Flight test coating** - A coating applied to aircraft other than missiles or single-use aircraft prior to flight testing to protect the aircraft from corrosion and to provide required marking during flight test evaluation.

(LL) **Flush cleaning** - Removal of contaminants such as dirt, grease, oil, and coatings from an aerospace vehicle or component or coating equipment by passing solvent over, into, or through the item being cleaned. The solvent may simply be poured into the item being cleaned and then drained, or assisted by air or hydraulic pressure, or by pumping. Hand-wipe cleaning operations where wiping, scrubbing, mopping, or other hand action are used are not included.

(MM) **Fuel tank adhesive** - An adhesive used to bond components exposed to fuel and must be compatible with fuel tank coatings.

(NN) **Fuel tank coating** - A coating applied to fuel tank components for the purpose of corrosion and/or bacterial growth inhibition and to assure sealant adhesion in extreme environmental conditions.

(OO) **Grams of VOC per liter of coating (less water and less exempt solvent)** - The weight of VOC per combined volume of total volatiles and coating solids, less water and exempt compounds. Can be calculated by the following equation:

Figure: 30 TAC §115.420(b)(1)(OO) (No change.)

$$\text{grams of VOC per liter of coating} \\ \text{(less water and less exempt solvent)} = \frac{W_s - W_w - W_{es}}{V_s - V_w - V_{es}}$$

W_s = weight of total volatiles in grams

W_w = weight of water in grams

W_{es} = weight of exempt compounds in grams

V_s = volume of coating in liters

V_w = volume of water in liters

V_{es} = volume of exempt compounds in liters

(PP) **Hand-wipe cleaning operation** - Removing contaminants such as dirt, grease, oil, and coatings from an aerospace vehicle or component by physically rubbing it with a material such as a rag, paper, or cotton swab that has been moistened with a cleaning solvent.

(QQ) **High temperature coating** - A coating designed to withstand temperatures of more than 350 degrees Fahrenheit.

(RR) **Hydrocarbon-based cleaning solvent** - A solvent which is composed of VOC (photochemically reactive hydrocarbons) and/or oxygenated hydrocarbons, has a maximum vapor pressure of seven millimeters of mercury (mm Hg) at 20 degrees Celsius (68 degrees Fahrenheit), and contains no hazardous air pollutant (HAP) identified in the 1990 Amendments to the Federal Clean Air Act (FCAA), §112(b).

(SS) **Insulation covering** - Material that is applied to foam insulation to protect the insulation from mechanical or environmental damage.

(TT) **Intermediate release coating** - A thin coating applied beneath topcoats to assist in removing the topcoat in depainting operations and generally to allow the use of less hazardous depainting methods.

(UU) **Lacquer** - A clear or pigmented coating formulated with a nitrocellulose or synthetic resin to dry by evaporation without a chemical reaction. Lacquers are resolvable in their original solvent.

(VV) **Limited access space** - Internal surfaces or passages of an aerospace vehicle or component that cannot be reached without the aid of an airbrush or a spray gun extension for the application of coatings.

(WW) **Metalized epoxy coating** - A coating that contains relatively large quantities of metallic pigmentation for appearance and/or added protection.

(XX) **Mold release** - A coating applied to a mold surface to prevent the molded piece from sticking to the mold as it is removed.

(YY) **Monthly weighted average** - The total weight of VOC emission from all coatings divided by the total volume of those coatings (minus water and exempt solvents) delivered to the application system each calendar month. Coatings shall not be combined for purposes of calculating the monthly weighted average. In addition, determination of compliance is based on each individual coating operation.

(ZZ) **Nonstructural adhesive** - An adhesive that bonds nonload bearing aerospace components in noncritical applications and is not covered in any other specialty adhesive categories.

(AAA) **Operating parameter value** - A minimum or maximum value established for a control equipment or process parameter that, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has continued to comply with an applicable emission limitation.

(BBB) **Optical antireflection coating** - A coating with a low reflectance in the infrared and visible wavelength ranges that is used for antireflection on or near optical and laser hardware.

(CCC) **Part marking coating** - Coatings or inks used to make identifying markings on materials, components, and/or assemblies of aerospace vehicles. These markings may be either permanent or temporary.

(DDD) **Pretreatment coating** - An organic coating that contains at least 0.5% acids by weight and is applied directly to metal or composite surfaces to provide surface etching, corrosion resistance, adhesion, and ease of stripping.

(EEE) **Primer** - The first layer and any subsequent layers of identically formulated coating applied to the surface of an aerospace vehicle or component. Primers are typically used for corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent coatings. Primers that are defined as specialty coatings are not included under this definition.

(FFF) **Radome** - The nonmetallic protective housing for electromagnetic transmitters and receivers (e.g., radar, electronic countermeasures, etc.).

(GGG) **Rain erosion-resistant coating** - A coating or coating system used to protect the leading edges of parts such as flaps, stabilizers, radomes, engine inlet nacelles, etc. against erosion caused by rain impact during flight.

(HHH) **Research and development** - An operation whose primary purpose is for research and development of new processes and products and that is conducted under the close supervision of technically trained personnel and is not involved in the manufacture of final or intermediate products for commercial purposes, except in a de minimis manner.

(III) **Rocket motor bonding adhesive** - An adhesive used in rocket motor bonding applications.

(JJJ) **Rocket motor nozzle coating** - A catalyzed epoxy coating system used in elevated temperature applications on rocket motor nozzles.

(KKK) **Rubber-based adhesive** - A quick setting contact cement that provides a strong, yet flexible bond between two mating surfaces that may be of dissimilar materials.

(LLL) **Scale inhibitor** - A coating that is applied to the surface of a part prior to thermal processing to inhibit the formation of scale.

(MMM) **Screen print ink** - An ink used in screen printing processes during fabrication of decorative laminates and decals.

(NNN) **Sealant** - A material used to prevent the intrusion of water, fuel, air, or other liquids or solids from certain areas of aerospace vehicles or components. There are two categories of sealants: extrudable/rollable/brushable sealants and sprayable sealants.

(OOO) **Seal coat maskant** - An overcoat applied over a maskant to improve abrasion and chemical resistance during production operations.

(PPP) **Self-priming topcoat** - A topcoat that is applied directly to an uncoated aerospace vehicle or component for purposes of corrosion prevention, environmental protection, and functional fluid resistance. More than one layer of identical coating formulation may be applied to the vehicle or component.

(QQQ) **Semiaqueous cleaning solvent** - A solution in which water is a primary ingredient. More than 60% by volume of the solvent solution as applied must be water.

(RRR) **Silicone insulation material** - An insulating material applied to exterior metal surfaces for protection from high temperatures caused by atmospheric friction or engine exhaust. These materials differ from ablative coatings in that they are not "sacrificial."

(SSS) **Solid film lubricant** - A very thin coating consisting of a binder system containing as its chief pigment material one or more of the following: molybdenum, graphite, polytetrafluoroethylene, or other solids that act as a dry lubricant between faying (i.e., closely or tightly fitting) surfaces.

(TTT) **Space vehicle** - A man-made device, either manned or unmanned, designed for operation beyond earth's atmosphere. This definition includes integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets, and test coupons. Also included is auxiliary equipment associated with test, transport, and storage, that through contamination can compromise the space vehicle performance.

(UUU) **Specialty coating** - A coating that, even though it meets the definition of a primer, topcoat, or self-priming topcoat, has additional performance criteria beyond those of primers, topcoats, and self-priming topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesively joining substrates, or enhanced corrosion protection.

(VVV) **Specialized function coating** - A coating that fulfills extremely specific engineering requirements that are limited in application and are characterized by low volume usage. This category excludes coatings covered in other specialty coating categories.

(WWW) **Structural autoclavable adhesive** - An adhesive used to bond load-carrying aerospace components that is cured by heat and pressure in an autoclave.

(XXX) **Structural nonautoclavable adhesive** - An adhesive cured under ambient conditions that is used to bond load-carrying aerospace components or other critical functions, such as nonstructural bonding in the proximity of engines.

(YYY) **Surface preparation** - The removal of contaminants from the surface of an aerospace vehicle or component or the activation or reactivation of the surface in preparation for the application of a coating.

(ZZZ) **Temporary protective coating** - A coating applied to provide scratch or corrosion protection during manufacturing, storage, or transportation. Two types include peelable protective coatings and alkaline removable coatings. These materials are not intended to protect against strong acid or alkaline solutions. Coatings that provide this type of protection from chemical processing are not included in this category.

(AAAA) **Thermal control coating** - A coating formulated with specific thermal conductive or radiative properties to permit temperature control of the substrate.

(BBBB) **Topcoat** - A coating that is applied over a primer on an aerospace vehicle or component for appearance, identification, camouflage, or protection. Topcoats that are defined as specialty coatings are not included under this definition.

(CCCC) **Touch-up and repair coating** - A coating used to cover minor coating imperfections appearing after the main coating operation.

(DDDD) **Touch-up and repair operation** - That portion of the coating operation that is the incidental application of coating used to cover minor imperfections in the coating finish or to achieve complete coverage. This definition includes out-of-sequence or out-of-cycle coating.

(EEEE) **VOC composite vapor pressure** - The sum of the partial pressures of the compounds defined as VOCs, determined by the following calculation:

Figure: 30 TAC §115.420(b)(1)(EEEE)

$$PP_c = \frac{\sum_{i=1}^n \frac{W_i}{MW_i} \times VP_i}{\frac{W_w}{MW_w} + \sum_{e=1}^n \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

- W_i = Weight of the "i"th VOC compound, grams.
- W_w = Weight of water, grams.
- W_e = Weight of nonwater, non-VOC compound, grams.
- MW_i = Molecular weight of the "i"th VOC compound, g/g-mole.
- MW_w = Molecular weight of water, g/g-mole.
- MW_e = Molecular weight of exempt compound, g/g-mole.
- PP_c = VOC composite partial pressure at 20 degrees Celsius, millimeters of mercury (mm Hg).
- VP_i = Vapor pressure of the "i"th VOC compound at 20 degrees Celsius, mm Hg.

(FFFF) **Waterborne (water-reducible) coating** - A coating which contains more than 5.0% water by weight as applied in its volatile fraction.

(GGGG) **Wet fastener installation coating** - A primer or sealant applied by dipping, brushing, or daubing to fasteners that are installed before the coating is cured.

(HHHH) **Wing coating** - A corrosion-resistant topcoat that is resilient enough to withstand the flexing of the wings.

(2) **Can coating** - The coating of cans for beverages (including beer), edible products (including meats, fruit, vegetables, and others), tennis balls, motor oil, paints, and other mass-produced cans.

(3) **Coil coating** - The coating of any flat metal sheet or strip supplied in rolls or coils.

(4) **Fabric coating** - The application of coatings to fabric, which includes rubber application (rainwear, tents, and industrial products such as gaskets and diaphragms).

(5) **Factory surface coating of flat wood paneling** - Coating of flat wood paneling products, including hardboard, hardwood plywood, particle board, printed interior paneling, and tile board.

(6) **Large appliance coating** - The coating of doors, cases, lids, panels, and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners, and other large appliances.

(7) **Metal furniture coating** - The coating of metal furniture (tables, chairs, wastebaskets, beds, desks, lockers, benches, shelves, file cabinets, lamps, and other metal furniture products) or the coating of any metal part which will be a part of a nonmetal furniture product.

(8) **Mirror backing coating** - The application of coatings to the silvered surface of a mirror.

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

(A) **Clear coat** - A coating which lacks opacity or which is transparent and which may or may not have an undercoat that is used as a reflectant base or undertone color.

(B) **Drum (metal)** - Any cylindrical metal shipping container with a nominal capacity equal to or greater than 12 gallons (45.4 liters) but equal to or less than 110 gallons (416 liters).

(C) **Extreme performance coating** - A coating intended for exposure to extreme environmental conditions, such as continuous outdoor exposure; temperatures frequently above 95 degrees Celsius (203 degrees Fahrenheit); detergents; abrasive and scouring agents; solvents; and corrosive solutions, chemicals, or atmospheres.

(D) **High-bake coatings** - Coatings designed to cure at temperatures above 194 degrees Fahrenheit.

(E) **Low-bake coatings** - Coatings designed to cure at temperatures of 194 degrees Fahrenheit or less.

(F) **Miscellaneous metal parts and products (MMPP) coating** - The coating of MMPP in the following categories at original equipment manufacturing operations; designated on-site maintenance shops which recoat used parts and products; and off-site job shops which coat new parts and products or which recoat used parts and products:

(i) large farm machinery (harvesting, fertilizing, and planting machines, tractors, combines, etc.);

(ii) small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.);

(iii) small appliances (fans, mixers, blenders, crock pots, dehumidifiers, vacuum cleaners, etc.);

(iv) commercial machinery (computers and auxiliary equipment, typewriters, calculators, vending machines, etc.);

(v) industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.);

(vi) fabricated metal products (metal-covered doors, frames, etc.); and

(vii) any other category of coated metal products, including, but not limited to, those which are included in the Standard Industrial Classification Code major group 33 (primary metal industries), major group 34 (fabricated metal products), major group 35 (nonelectrical machinery), major group 36 (electrical machinery), major group 37 (transportation equipment), major group 38 (miscellaneous instruments), and major group 39 (miscellaneous manufacturing industries). Excluded are those surface coating processes specified in paragraphs (1) - (8) and (10) - (14) of this subsection.

(G) **Pail (metal)** - Any cylindrical metal shipping container with a nominal capacity equal to or greater than 1 gallon (3.8 liters) but less than 12 gallons (45.4 liters) and constructed of 29 gauge or heavier material.

(10) **Paper coating** - The coating of paper and pressure-sensitive tapes (regardless of substrate and including paper, fabric, and plastic film) and related web coating processes on plastic film (including typewriter ribbons, photographic film, and magnetic tape) and metal foil (including decorative, gift wrap, and packaging).

(11) **Marine coatings.**

(A) **Air flask specialty coating** - Any special composition coating applied to interior surfaces of high pressure breathing air flasks to provide corrosion resistance and that is certified safe for use with breathing air supplies.

(B) **Antenna specialty coating** - Any coating applied to equipment through which electromagnetic signals must pass for reception or transmission.

(C) **Antifoulant specialty coating** - Any coating that is applied to the underwater portion of a vessel to prevent or reduce the attachment of biological organisms and that is registered with the EPA as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act.

(D) **Batch** - The product of an individual production run of a coating manufacturer's process. (A batch may vary in composition from other batches of the same product.)

(E) **Bitumens** - Black or brown materials that are soluble in carbon disulfide, which consist mainly of hydrocarbons.

(F) **Bituminous resin coating** - Any coating that incorporates bitumens as a principal component and is formulated primarily to be applied to a substrate or surface to resist ultraviolet radiation and/or water.

(G) **Epoxy** - Any thermoset coating formed by reaction of an epoxy resin (i.e., a resin containing a reactive epoxide with a curing agent).

(H) **General use coating** - Any coating that is not a specialty coating.

(I) **Heat resistant specialty coating** - Any coating that during normal use must withstand a temperature of at least 204 degrees Celsius (400 degrees Fahrenheit).

(J) **High-gloss specialty coating** - Any coating that achieves at least 85% reflectance on a 60 degree meter when tested by the American Society for Testing and Materials (ASTM) Method D-523.

(K) **High-temperature specialty coating** - Any coating that during normal use must withstand a temperature of at least 426 degrees Celsius (800 degrees Fahrenheit).

(L) **Inorganic zinc (high-build) specialty coating** - A coating that contains 960 grams per liter (eight pounds per gallon) or more elemental zinc incorporated into an inorganic silicate binder that is applied to steel to provide galvanic corrosion resistance. (These coatings are typically applied at more than two mil dry film thickness.)

(M) **Maximum allowable thinning ratio** - The maximum volume of thinner that can be added per volume of coating without exceeding the applicable VOC limit of §115.421(a)(15)(A) of this title.

(N) **Military exterior specialty coating** - Any exterior topcoat applied to military or United States Coast Guard vessels that are subject to specific chemical, biological, and radiological washdown requirements.

(O) **Mist specialty coating** - Any low viscosity, thin film, epoxy coating applied to an inorganic zinc primer that penetrates the porous zinc primer and allows the occluded air to escape through the paint film prior to curing.

(P) **Navigational aids specialty coating** - Any coating applied to Coast Guard buoys or other Coast Guard waterway markers when they are recoated aboard ship at their usage site and immediately returned to the water.

(Q) **Nonskid specialty coating** - Any coating applied to the horizontal surfaces of a marine vessel for the specific purpose of providing slip resistance for personnel, vehicles, or aircraft.

(R) **Nonvolatiles (or volume solids)** - Substances that do not evaporate readily. This term refers to the film-forming material of a coating.

(S) **Nuclear specialty coating** - Any protective coating used to seal porous surfaces such as steel (or concrete) that otherwise would be subject to intrusion by radioactive materials. These coatings must be resistant to long-term (service life) cumulative radiation exposure

(ASTM D4082-83), relatively easy to decontaminate (ASTM D4256-83), and resistant to various chemicals to which the coatings are likely to be exposed (ASTM 3912-80). (For nuclear coatings, see the general protective requirements outlined by the U.S. Atomic Energy Commission in a report entitled "U.S. Atomic Energy Commission Regulatory Guide 1.54" dated June 1973, available through the Government Printing Office at (202) 512-2249 as document number A74062-00001.)

(T) **Organic zinc specialty coating** - Any coating derived from zinc dust incorporated into an organic binder that contains more than 960 grams of elemental zinc per liter (eight pounds per gallon) of coating, as applied, and that is used for the expressed purpose of corrosion protection.

(U) **Pleasure craft** - Any marine or fresh-water vessel used by individuals for noncommercial, nonmilitary, and recreational purposes that is less than 20 meters (65.6 feet) in length. A vessel rented exclusively to, or chartered for, individuals for such purposes shall be considered a pleasure craft.

(V) **Pretreatment wash primer specialty coating** - Any coating that contains a minimum of 0.5% acid by weight that is applied only to bare metal surfaces to etch the metal surface for corrosion resistance and adhesion of subsequent coatings.

(W) **Repair and maintenance of thermoplastic coating of commercial vessels (specialty coating)** - Any vinyl, chlorinated rubber, or bituminous resin coating that is applied

over the same type of existing coating to perform the partial recoating of any in-use commercial vessel.

(This definition does not include coal tar epoxy coatings, which are considered "general use" coatings.)

(X) **Rubber camouflage specialty coating** - Any specially formulated epoxy coating used as a camouflage topcoat for exterior submarine hulls and sonar domes.

(Y) **Sealant for thermal spray aluminum** - Any epoxy coating applied to thermal spray aluminum surfaces at a maximum thickness of one dry mil.

(Z) **Ship** - Any marine or fresh-water vessel, including self-propelled vessels, those propelled by other craft (barges), and navigational aids (buoys). This definition includes, but is not limited to, all military and Coast Guard vessels, commercial cargo and passenger (cruise) ships, ferries, barges, tankers, container ships, patrol and pilot boats, and dredges. Pleasure craft and offshore oil or gas drilling platforms are not considered ships.

(AA) **Shipbuilding and ship repair operations** - Any building, repair, repainting, converting, or alteration of ships or offshore oil or gas drilling platforms.

(BB) **Special marking specialty coating** - Any coating that is used for safety or identification applications, such as ship numbers and markings on flight decks.

(CC) **Specialty interior coating** - Any coating used on interior surfaces aboard United States military vessels pursuant to a coating specification that requires the coating to meet specified fire retardant and low toxicity requirements, in addition to the other applicable military physical and performance requirements.

(DD) **Tack coat specialty coating** - Any thin film epoxy coating applied at a maximum thickness of two dry mils to prepare an epoxy coating that has dried beyond the time limit specified by the manufacturer for the application of the next coat.

(EE) **Undersea weapons systems specialty coating** - Any coating applied to any component of a weapons system intended to be launched or fired from under the sea.

(FF) **Weld-through preconstruction primer (specialty coating)** - A coating that provides corrosion protection for steel during inventory, is typically applied at less than one mil dry film thickness, does not require removal prior to welding, is temperature resistant (burn back from a weld is less than 1.25 centimeters (0.5 inches)), and does not normally require removal before applying film-building coatings, including inorganic zinc high-build coatings. When constructing new vessels, there may be a need to remove areas of weld-through preconstruction primer due to surface damage or contamination prior to application of film-building coatings.

(12) **Vehicle coating.**

(A) Automobile and light-duty truck manufacturing.

(i) **Automobile coating** - The assembly-line coating of passenger cars, or passenger car derivatives, capable of seating 12 or fewer passengers.

(ii) **Light-duty truck coating** - The assembly-line coating of motor vehicles rated at 8,500 pounds (3,855.5 kg) gross vehicle weight or less and designed primarily for the transportation of property, or derivatives such as pickups, vans, and window vans.

(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.)

$$\text{VOC } T_{bc/cc} = \frac{\text{VOC}_{bc} + (2 \times \text{VOC}_{cc})}{3}$$

where:

VOC $T_{bc/cc}$ is the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, in the basecoat/clearcoat system;

VOC_{bc} is the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, of any given basecoat; and

VOC_{cc} is the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, of any given clearcoat.

(ii) **Precoat** - Any coating that is applied to bare metal to deactivate the metal surface for corrosion resistance to a subsequent water-based primer. This coating is applied to bare metal solely for the prevention of flash rusting.

(iii) **Pretreatment** - Any coating which contains a minimum of 0.5% acid by weight that is applied directly to bare metal surfaces to etch the metal surface for corrosion resistance and adhesion of subsequent coatings.

(iv) **Primer or primer surfacers** - Any base coat, sealer, or intermediate coat which is applied prior to colorant or aesthetic coats.

(v) **Sealers** - Coatings that are formulated with resins which, when dried, are not readily soluble in typical solvents. These coatings act as a shield for surfaces over which they are sprayed by resisting the penetration of solvents which are in the final topcoat.

(vi) **Specialty coatings** - Coatings or additives which are necessary due to unusual job performance requirements. These coatings or additives prevent the occurrence of surface defects and impart or improve desirable coating properties. These products include, but are not limited to, uniform finish blenders, elastomeric materials for coating of flexible plastic parts, coatings for non-metallic parts, jaming clear coatings, gloss flatteners, and anti-glare/safety coatings.

(vii) **Three-stage system** - A topcoat system composed of a pigmented basecoat portion, a semitransparent midcoat portion, and a transparent clearcoat portion. The VOC content of a three-stage system shall be calculated according to the following formula:

Figure: 30 TAC §115.420(b)(12)(B)(vii) (No change.)

$$\text{VOC } T_{3\text{-stage}} = \frac{\text{VOC}_{bc} + \text{VOC}_{mc} + (2 \times \text{VOC}_{cc})}{4}$$

where:

$\text{VOC } T_{3\text{-stage}}$ is the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, in the three-stage system;

VOC_{bc} is the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, of any given basecoat;

VOC_{mc} is the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, of any given midcoat; and

VOC_{cc} is the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, of any given clearcoat.

(viii) **Vehicle refinishing (body shops)** - The coating of vehicles, 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 trailers and construction equipment is not included.

(ix) **Wipe-down solutions** - Any solution used for cleaning and surface preparation.

(13) **Vinyl coating** - The use of printing or any decorative or protective topcoat applied over vinyl sheets or vinyl-coated fabric.

(14) **Wood parts and products coating.**

(A) The following terms apply to wood parts and products coating facilities subject to §115.421(a)(13) of this title.

(i) **Clear coat** - A coating which lacks opacity or which is transparent and uses the undercoat as a reflectant base or undertone color.

(ii) **Clear sealers** - Liquids applied over stains, toners, and other coatings to protect these coatings from marring during handling and to limit absorption of succeeding coatings.

(iii) **Final repair coat** - Liquids applied to correct imperfections or damage to the topcoat.

(iv) **Opaque ground coats and enamels** - Colored, opaque liquids applied to wood or wood composition substrates which completely hide the color of the substrate in a single coat.

(v) **Semitransparent spray stains and toners** - Colored liquids

applied to wood to change or enhance the surface without concealing the surface, including but not limited to, toners and nongrain-raising stains.

(vi) **Semitransparent wiping and glazing stains** - Colored liquids

applied to wood that require multiple wiping steps to enhance the grain character and to partially fill the porous surface of the wood.

(vii) **Shellacs** - Coatings formulated solely with the resinous secretions

of the lac beetle (*laccifer lacca*), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.

(viii) **Topcoat** - A coating which provides the final protective and

aesthetic properties to wood finishes.

(ix) **Varnishes** - Clear wood finishes formulated with various resins to

dry by chemical reaction on exposure to air.

(x) **Wash coat** - A low-solids clear liquid applied over semitransparent

stains and toners to protect the color coats and to set the fibers for subsequent sanding or to separate spray stains from wiping stains to enhance color depth.

(xi) **Wood parts and products coating** - The coating of wood parts and products, excluding factory surface coating of flat wood paneling.

(B) The following terms apply to wood furniture manufacturing facilities subject to §115.421(a)(14) of this title.

(i) **Adhesive** - Any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means. Adhesives are not considered to be coatings or finishing materials for wood furniture manufacturing facilities subject to §115.421(a)(14) of this title.

(ii) **Basecoat** - A coat of colored material, usually opaque, that is applied before graining inks, glazing coats, or other opaque finishing materials and is usually topcoated for protection.

(iii) **Cleaning operations** - Operations in which organic solvent is used to remove coating materials from equipment used in wood furniture manufacturing operations.

(iv) **Continuous coater** - A finishing system that continuously applies finishing materials onto furniture parts moving along a conveyor system. Finishing materials that are not transferred to the part are recycled to the finishing material reservoir. Several types of application

methods can be used with a continuous coater, including spraying, curtain coating, roll coating, dip coating, and flow coating.

(v) **Conventional air spray** - A spray coating method in which the coating is atomized by mixing it with compressed air at an air pressure greater than 10 pounds per square inch gauge (psig) at the point of atomization. Airless and air-assisted airless spray technologies are not conventional air spray because the coating is not atomized by mixing it with compressed air. Electrostatic spray technology is also not conventional air spray because an electrostatic charge is employed to attract the coating to the workpiece. In addition, high-volume low-pressure (HVLP) spray technology is not conventional air spray because its pressure is less than 10 psig.

(vi) **Finishing application station** - The part of a finishing operation where the finishing material is applied (for example, a spray booth).

(vii) **Finishing material** - A coating used in the wood furniture industry. For the wood furniture manufacturing industry, such materials include, but are not limited to, basecoats, stains, washcoats, sealers, and topcoats.

(viii) **Finishing operation** - Those activities in which a finishing material is applied to a substrate and is subsequently air-dried, cured in an oven, or cured by radiation.

(ix) **Organic solvent** - A liquid containing VOCs that is used for dissolving or dispersing constituents in a coating; adjusting the viscosity of a coating; cleaning; or washoff. When used in a coating, the organic solvent evaporates during drying and does not become a part of the dried film.

(x) **Sealer** - A finishing material used to seal the pores of a wood substrate before additional coats of finishing material are applied. Washcoats, which are used in some finishing systems to optimize aesthetics, are not sealers.

(xi) **Stain** - Any color coat having a solids content of no more than 8.0% by weight that is applied in single or multiple coats directly to the substrate. Includes, but is not limited to, nongrain raising stains, equalizer stains, sap stains, body stains, no-wipe stains, penetrating stains, and toners.

(xii) **Strippable booth coating** - A coating that is applied to a booth wall to provide a protective film to receive overspray during finishing operations; is subsequently peeled off and disposed; and reduces or eliminates the need to use organic solvents to clean booth walls.

(xiii) **Topcoat** - The last film-building finishing material applied in a finishing system. A material such as a wax, polish, nonoxidizing oil, or similar substance that must be periodically reapplied to a surface over its lifetime to maintain or restore the reapplied material's intended effect is not considered to be a topcoat.

(xiv) **Touch-up and repair** - The application of finishing materials to cover minor finishing imperfections.

(xv) **Washcoat** - A transparent special purpose coating having a solids content of 12% by weight or less. Washcoats are applied over initial stains to protect and control color and to stiffen the wood fibers in order to aid sanding.

(xvi) **Washoff operations** - Those operations in which organic solvent is used to remove coating from a substrate.

(xvii) **Wood furniture** - Any product made of wood, a wood product such as rattan or wicker, or an engineered wood product such as particleboard that is manufactured under any of the following standard industrial classification codes: 2434 (wood kitchen cabinets), 2511 (wood household furniture, except upholstered), 2512 (wood household furniture, upholstered), 2517 (wood television, radios, phonograph and sewing machine cabinets), 2519 (household furniture not elsewhere classified), 2521 (wood office furniture), 2531 (public building and related furniture), 2541 (wood office and store fixtures, partitions, shelving and lockers), 2599 (furniture and fixtures not elsewhere classified), or 5712 (custom kitchen cabinets).

(xviii) **Wood furniture component** - Any part that is used in the manufacture of wood furniture. Examples include, but are not limited to, drawer sides, cabinet doors, seat cushions, and laminated tops. However, foam seat cushions manufactured and fabricated at a

facility that does not engage in any other wood furniture or wood furniture component manufacturing operation are excluded from this definition.

(xix) **Wood furniture manufacturing operations** - The finishing, cleaning, and washoff operations associated with the production of wood furniture or wood furniture components.

§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) Large appliance coating. VOC emissions from the application, flashoff, and oven areas during the coating of large appliances (prime and topcoat, or single coat) shall not exceed 2.8

pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.34 kg/liter).

(2) Metal furniture coating. VOC emissions from metal furniture coating lines (prime and topcoat, or single coat) shall not exceed 3.0 pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.36 kg/liter).

(3) Coil coating. VOC emissions from the coating (prime and topcoat, or single coat) of metal coils shall not exceed 2.6 pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.31 kg/liter).

(4) Paper coating. VOC emissions from the coating of paper (or specified tapes or films) shall not exceed 2.9 pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.35 kg/liter).

(5) Fabric coating. VOC emissions from the coating of fabric shall not exceed 2.9 pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.35 kg/liter).

(6) Vinyl coating. VOC emissions from the coating of vinyl fabrics or sheets shall not exceed 3.8 pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.45 kg/liter). Plastisol coatings should not be included in calculations.

(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(a)(7) (No change.)

Affected Operation	VOC Emission Limitation	
	pounds per gallon of coating	kg per liter of coating
sheet basecoat (exterior and interior) and over-varnish	2.8	0.34
two-piece can exterior (base-coat and over-varnish)	2.8	0.34
two- and three-piece can interior body spray, two-piece can exterior end (spray or roll coat)	4.2	0.51
three-piece can side-seam spray	5.5	0.66
end sealing compound	3.7	0.44

(8) Vehicle coating.

(A) The following VOC emission limits shall be achieved for all automobile and light-duty truck manufacturing, on the basis of solvent content per gallon of coating (minus water and exempt solvents) delivered to the application system or for primer surfacer and top coat application, compliance may be demonstrated on the basis of VOC emissions per gallon of solids deposited as determined by §115.425(3) of this title (relating to Testing Requirements).

Figure: 30 TAC §115.421(a)(8)(A) (No change.)

Operation (including application, flashoff, and oven areas)	VOC Emission Limitation			
	Coating delivered (minus water and exempt solvent)		Solids deposited	
	lb/gal	kg/liter	lb/gal	kg/liter
prime application (body and front-end sheet metal)	1.2	0.15	N/A	N/A
primer surfacer application	2.8	0.34	15.1	1.81
topcoat application	2.8	0.34	15.1	1.81
final repair application	4.8	0.58	*	*

* As an alternative to the emission limitation of 4.8 pounds of VOC per gallon of coating applied for final repair, if a source owner does not compile records sufficient to enable determination of a daily weighted average VOC content, compliance with the final repair emission limitation may be demonstrated each day by meeting a standard of 4.8 pounds of VOC per gallon of coating (minus water and exempt solvents) on an occurrence weighted average basis. Compliance with such alternative emission limitation shall be determined in accordance with the procedure specified in §115.425(3) of this title.

(B) VOC emissions from the coatings or solvents used in vehicle refinishing

(body shops) shall not exceed the following limits, as delivered to the application system:

- (i) 5.0 pounds per gallon (0.60 kg/liter) of coating (minus water and exempt solvent) for primers or primer surfacers;

(ii) 5.5 pounds per gallon (0.66 kg/liter) of coating (minus water and exempt solvent) for precoat;

(iii) 6.5 pounds per gallon (0.78 kg/liter) of coating (minus water and exempt solvent) for pretreatment;

(iv) 5.0 pounds per gallon (0.60 kg/liter) of coating (minus water and exempt solvent) for single-stage topcoats;

(v) 5.0 pounds per gallon (0.60 kg/liter) of coating (minus water and exempt solvent) for basecoat/clearcoat systems;

(vi) 5.2 pounds per gallon (0.62 kg/liter) of coating (minus water and exempt solvent) for three-stage systems;

(vii) 7.0 pounds per gallon (0.84 kg/liter) of coating (minus water and exempt solvent) for specialty coatings;

(viii) 6.0 pounds per gallon (0.72 kg/liter) of coating (minus water and exempt solvent) for sealers; and

(ix) 1.4 pounds per gallon (0.17 kg/liter) of wipe-down solutions.

(C) Additional control requirements for vehicle refinishing (body shops) are referenced in §115.422 of this title (relating to Control Requirements).

(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) 4.3 pounds per gallon (0.52 kg/liter) of coating (minus water and exempt solvent) delivered to the application system as a clear coat; or as an interior protective coating for pails and drums;

(ii) 3.5 pounds per gallon (0.42 kg/liter) of coating (minus water and exempt solvent) delivered to the application system as a low-bake coating; or that utilizes air or forced air driers;

(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;

(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) If more than one emission limitation in subparagraph (A) of this paragraph applies to a specific coating, then the least stringent emission limitation shall apply.

(C) All VOC emissions from non-exempt solvent washings shall be included in determination of compliance with the emission limitations in subparagraph (A) of this paragraph unless the solvent is directed into containers that prevent evaporation into the atmosphere.

(10) 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(a)(10) (No change.)

Product Category	VOC Emission Limitation	
	lb VOC/ 1000 ft ² of coated surface	kg VOC/ 100 m ² of coated surface
printed interior wall panels made of hardwood plywood and thin particle board (less than 1/4 inch (0.64 cm)) in thickness	6.0	2.9
natural finish hardwood plywood panels	12.0	5.8
hardwood paneling with Class II finish (ANSI Standard PS-59-73)	10.0	4.8

(11) Aerospace coatings. The VOC content of coatings, including any VOC-containing materials added to the original coating supplied by the manufacturer, which are applied to aerospace vehicles or components shall not exceed the following limits (in grams of VOC per liter of coating, less water and exempt solvent). The following applications are exempt from the VOC content limits of this paragraph: manufacturing or re-work of space vehicles or antique aerospace vehicles or components of each; touchup; United States Department of Defense classified coatings; and separate coating formulations in volumes less than 50 gallons per year to a maximum of 200 gallons per year for all such formulations at an account.

(A) For the broad categories of primers, topcoats, and chemical milling maskants (Type I/II) which are not specialty coatings as listed in subparagraph (B) of this paragraph:

(i) primer, 350;

(ii) topcoats (including self-priming topcoats), 420; and

(iii) chemical milling maskants:

(I) Type I, 622; and

(II) Type II, 160.

(B) For specialty coatings:

Figure: 30 TAC §115.421(a)(11)(B) (No change.)

VOC LIMITS FOR SPECIALTY COATINGS (IN GRAMS OF VOC PER LITER OF COATING,
 LESS WATER AND EXEMPT SOLVENT)

Coating type	Limit	Coating type	Limit
Ablative Coating	600	Insulation Covering	740
Adhesion Promoter	890	Intermediate Release Coating	750
Adhesive Bonding Primers:		Lacquer	830
Cured at 250°F or below	850	Maskants:	
Cured above 250°F	1030	Bonding Maskant	1,230
Adhesives:		Critical Use and Line Sealer Maskant	1,020
Commercial Interior Adhesive	760	Seal Coat Maskant	1,230
Cyanoacrylate Adhesive	1,020	Metallized Epoxy Coating	740
Fuel Tank Adhesive	620	Mold Release	780
Nonstructural Adhesive	360	Optical Anti-Reflective Coating	750
Rocket Motor Bonding Adhesive	890	Part Marking Coating	850
Rubber-based Adhesive	850	Pretreatment Coating	780
Structural Autoclavable Adhesive	60	Rain Erosion-Resistant Coating	850
Structural Nonautoclavable Adhesive	850	Rocket Motor Nozzle Coating	660
Antichafe Coating	660	Scale Inhibitor	880
Bearing Coating	620	Screen Print Ink	840
Caulking and Smoothing Compounds	850	Sealants:	
Chemical Agent-Resistant Coating	550	Extrudable/Rollable/Brushable Sealant	280
Clear Coating	720	Sprayable Sealant	600
Commercial Exterior Aerodynamic		Silicone Insulation Material	850
Structure Primer	650	Solid Film Lubricant	880
Compatible Substrate Primer	780	Specialized Function Coating	890
Corrosion Prevention Compound	710	Temporary Protective Coating	320
Cryogenic Flexible Primer	645	Thermal Control Coating	800
Dry Lubricative Material	880	Wet Fastener Installation Coating	675
Cryoprotective Coating	600	Wing Coating	850
Electric or Radiation-Effect Coating	800		
Electrostatic Discharge and Electromagnetic			
Interference (EMI) Coating	800		
Elevated-Temperature Skydrol-Resistant			
Commercial Primer	740		
Epoxy Polyamide Topcoat	660		
Fire-Resistant (interior) Coating	800		
Flexible Primer	640		
Flight-Test Coatings:			
Missile or Single Use Aircraft	420		
All Other	840		
Fuel-Tank Coating	720		
High-Temperature Coating	850		

(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;

(ii) 3.6 pounds per gallon (0.43 kg/liter) of coating (minus water and exempt solvent) delivered to a roll coating application system.

(B) All VOC emissions from solvent washings shall be included in determination of compliance with the emission limitations in subparagraph (A) of this paragraph, unless the solvent is directed into containers that prevent evaporation into the atmosphere.

(13) Surface coating of wood parts and products.

(A) In the Dallas/Fort Worth, El Paso, and Houston/Galveston areas, VOC emissions from the coating of wood parts and products shall not exceed the following limits, as delivered to the application system, for each surface coating type:

- (i) 5.9 pounds per gallon (0.71 kg/liter) of coating (minus water and exempt solvent) for clear topcoats;
- (ii) 6.5 pounds per gallon (0.78 kg/liter) of coating (minus water and exempt solvent) for wash coats;
- (iii) 6.0 pounds per gallon (0.72 kg/liter) of coating (minus water and exempt solvent) for final repair coats;
- (iv) 6.6 pounds per gallon (0.79 kg/liter) of coating (minus water and exempt solvent) for semitransparent wiping and glazing stains;
- (v) 6.9 pounds per gallon (0.83 kg/liter) of coating (minus water and exempt solvent) for semitransparent spray stains and toners;
- (vi) 5.5 pounds per gallon (0.66 kg/liter) of coating (minus water and exempt solvent) for opaque ground coats and enamels;
- (vii) 6.2 pounds per gallon (0.74 kg/liter) of coating (minus water and exempt solvent) for clear sealers;
- (viii) for shellac:

(I) 5.4 pounds per gallon (0.65 kg/liter) of coating (minus water and exempt solvent) for clear shellac; and

(II) 5.0 pounds per gallon (0.60 kg/liter) of coating (minus water and exempt solvent) for opaque shellac;

(ix) 5.0 pounds per gallon (0.60 kg/liter) of coating (minus water and exempt solvent) for varnish; and

(x) 7.0 pounds per gallon (0.84 kg/liter) of coating (minus water and exempt solvent) for all other coatings.

(B) All VOC emissions from solvent washings shall be included in determination of compliance with the emission limitations in subparagraph (A) of this paragraph, unless the solvent is directed into containers that prevent evaporation into the atmosphere.

(C) The requirements of §115.423(3) of this title (relating to Alternate Control Requirements) do not apply at wood parts and products coating facilities if:

(i) a vapor control system is used to control emissions from wood parts and products coating operations; and

(ii) all wood parts and products coatings comply with the emission limitations in subparagraph (A) of this paragraph.

(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 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 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 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 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 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 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 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.)

$$0.9 (0.8 (TC_1 + TC_2 + \dots)) \geq (ER_{TC1}) (TC_1) + (ER_{TC2}) (TC_2) + \dots \quad (\text{Inequality 1})$$

$$0.9 \{ [1.8 (TC_1 + TC_2 + \dots)] + [1.9 (SE_1 + SE_2 + \dots)] + [9.0 (WC_1 + WC_2 + \dots)] + [1.2 (BC_1 + BC_2 + \dots)] + [0.791 (ST_1 + ST_2 + \dots)] \} \geq [ER_{TC1} (TC_1) + ER_{TC2} (TC_2) + \dots] + [ER_{SE1} (SE_1) + ER_{SE2} (SE_2) + \dots] + [ER_{WC1} (WC_1) + ER_{WC2} (WC_2) + \dots] + [ER_{BC1} (BC_1) + ER_{BC2} (BC_2) + \dots] + [ER_{ST1} (ST_1) + ER_{ST2} (ST_2) + \dots] \quad (\text{Inequality 2})$$

where:

- TC_i = kilograms of solids of topcoat "i" used;
- SE_i = kilograms of solids of sealer "i" used;
- WC_i = kilograms of solids of washcoat "i" used;
- BC_i = kilograms of solids of basecoat "i" used;
- ST_i = liters of stain "i" used;
- ER_{TCi} = VOC content of topcoat "i" in kilograms of VOC per kilogram of solids, as delivered to the application system;
- ER_{SEi} = VOC content of sealer "i" in kilograms of VOC per kilogram of solids, as delivered to the application system;
- ER_{WCi} = VOC content of washcoat "i" in kilograms of VOC per kilogram of solids, as delivered to the application system;
- ER_{BCi} = VOC content of basecoat "i" in kilograms of VOC per kilogram of solids, as delivered to the application system; and
- ER_{STi} = VOC content of stain "i" in kilograms of VOC per kilogram of solids, as delivered to the application system.

In inequalities (1) and (2) the facility must use the actual VOC content of the finishing materials used before they were subject to this paragraph if the VOC content is less than the allowed VOC content. For example, if the facility was using topcoats with a VOC content of 1.7 kilograms of VOC per kilogram of solids (1.7 pounds of VOC per pound of solids) before being subject to this paragraph, they must use that value in Inequality (2) rather than 1.8; or

(v) 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 a combination of the methods presented in clauses (i), (ii), (iii), (iv), and (v) of this subparagraph.

(B) Strippable booth coatings used in cleaning operations shall contain no more 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.

(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.)

Coating Category	VOC limits ^{a, b}			
	Grams/liter coating (minus water and exempt solvent)	Pounds/gallon coating (minus water and exempt solvent)	Grams/liter solids ^c t ≥ 4.5°C (40°F)	Grams/liter solids ^c t < 4.5°C (40°F) ^d
General use	340	2.83	571	728
Specialty:				
Air flask	340	2.83	571	728
Antenna	530	4.42	1,439	----
Antifoulant	400	3.33	765	971
Heat resistant	420	3.50	841	1,069
High-gloss	420	3.50	841	1,069
High-temperature	500	4.17	1,237	1,597
Inorganic zinc high-build	340	2.83	571	728
Military exterior	340	2.83	571	728
Mist	610	5.08	2,235	----
Navigational aids	550	4.58	1,597	----
Nonskid	340	2.83	571	728
Nuclear	420	3.50	841	1,069
Organic zinc	360	3.00	630	802
Pretreatment wash primer	780	6.50	11,095	----
Repair and maintenance of thermoplastics	550	4.58	1,597	----
Rubber camouflage	340	2.83	571	728
Sealant for thermal spray aluminum	610	5.08	2,235	----
Special marking	490	4.08	1,178	----
Speciality interior	340	2.83	571	728
Tack coat	610	5.08	2,235	----
Undersea weapons systems	340	2.83	571	728
Weld-through preconstruction primer	650	5.42	2,885	----

^a The limits are expressed in two sets of equivalent units: grams per liter of coating (minus water and exempt solvent); and grams per liter of solids. Either set of limits may be used to demonstrate compliance.

^b To convert from grams/liter to pounds/gallon, multiply by (3.785 liters/gallon)(pound/453.6 grams) or 1/120. For compliance purposes, metric units define the standards.

^c VOC limits expressed in units of mass of VOC per volume of solids were derived from the VOC limits expressed in units of mass of VOC per volume of coating assuming the coatings contain no water or exempt compounds and that the volumes of all components within a coating are additive.^d These limits apply during cold-weather time periods (i.e., temperatures below 4.5 degrees Celsius (40 degrees

Fahrenheit)). Cold-weather allowances are not given to coatings in categories that permit less than 40% solids nonvolatiles) content by volume. Such coatings are subject to the same limits regardless of weather conditions.

(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.)

$$R = \frac{(V_s)(\text{VOC limit}) - m_{\text{VOC}}}{D_{\text{th}}} \quad (\text{Equation 1})$$

where:

- R = Maximum allowable thinning ratio for a given batch (liters of thinner per liter of coating as supplied);
- V_s = Volume fraction of solids in the batch as supplied (liter of solids per liter of coating as supplied);
- VOC limit = Maximum allowable as-applied VOC content of the coating (grams of VOC per liter of solids);
- m_{VOC} = VOC content of the batch as supplied (grams of VOC per liter of coating as supplied); and
- D_{th} = Density of the thinner (grams per liter).

(ii) If V_s is not supplied directly by the coating manufacturer, the owner or operator shall determine V_s as follows:

Figure: 30 TAC §115.421(a)(15)(B)(ii) (No change.)

$$V_s = \frac{1 - (m_{\text{volatiles}})}{D_{\text{avg}}} \quad (\text{Equation 2})$$

where:

- $m_{\text{volatiles}}$ = Total volatiles in the batch, including VOC, water, and exempt compounds (grams per liter of coating); and
 D_{avg} = Average density of volatiles in the batch (grams per liter).

(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) Large appliance coating. VOC emissions from the application, flashoff, and oven areas during the coating of large appliances (prime and topcoat, or single coat) shall not exceed 2.8 pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.34 kg/liter).

(2) Metal furniture coating. VOC emissions from metal furniture coating lines (prime and topcoat, or single coat) shall not exceed 3.0 pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.36 kg/liter).

(3) Coil coating. VOC emissions from the coating (prime and topcoat, or single coat) of metal coils shall not exceed 2.6 pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.31 kg/liter).

(4) Paper coating. VOC emissions from the coating of paper (or specified tapes or films) shall not exceed 2.9 pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.35 kg/liter).

(5) Fabric coating. VOC emissions from the coating of fabric shall not exceed 2.9 pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.35 kg/liter).

(6) Vinyl coating. VOC emissions from the coating of vinyl fabrics or sheets shall not exceed 3.8 pounds per gallon of coating (minus water and exempt solvent) delivered to the application system (0.45 kg/liter). Plastisol coatings should not be included in calculations.

(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.)

Affected Operation	VOC Emission Limitation	
	pounds per gallon of coating	kg per liter of coating
sheet basecoat (exterior and interior) and over-varnish	2.8	0.34
two-piece can exterior (base-coat and over-varnish)	2.8	0.34
two- and three-piece can interior body spray, two-piece can exterior end (spray or roll coat)	4.2	0.51
three-piece can side-seam spray	5.5	0.66
end sealing compound	3.7	0.44

(8) 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) 4.3 pounds per gallon (0.52 kg/liter) of coating (minus water and exempt solvent) delivered to the application system as a clear coat; or as an interior protective coating for pails and drums;

(ii) 3.5 pounds per gallon (0.42 kg/liter) of coating (minus water and exempt solvent) delivered to the application system as a low-bake coating; or that utilizes air or forced air driers;

(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.

(B) If more than one emission limitation in subparagraph (A) of this paragraph applies to a specific coating, then the least stringent emission limitation shall apply.

(C) All VOC emissions from nonexempt solvent washings shall be included in determination of compliance with the emission limitations in subparagraph (A) of this paragraph, unless the solvent is directed into containers that prevent evaporation into the atmosphere.

(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.)

Product Category	VOC Emission Limitation	
	lb VOC/ 1000 ft ² of coated surface	kg VOC/ 100 m ² of coated surface
printed interior wall panels made of hardwood plywood and thin particle board (less than 1/4 inch (0.64 cm)) in thickness	6.0	2.9
natural finish hardwood plywood panels	12.0	5.8
hardwood paneling with Class II finish (ANSI Standard PS-59-73)	10.0	4.8

(10) Aerospace coatings. Coatings applied to aerospace vehicles or components shall meet the requirements specified in subsection (a)(11) of this section and §115.422(5) of this title, unless exempted under §115.427(b) of this title (relating to Exemptions).

§115.422. Control Requirements.

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

(1) The owner or operator of each vehicle refinishing (body shop) operation shall minimize volatile organic compound (VOC) emissions during equipment cleanup by utilizing the following procedures:

(A) install and operate a system which totally encloses spray guns, cups, nozzles, bowls, and other parts during washing, rinsing, and draining procedures. Non-enclosed

cleaners may be used if the vapor pressure of the cleaning solvent is less than 100 millimeters of mercury (mm Hg) at 68 degrees Fahrenheit and the solvent is directed towards a drain that leads directly to an enclosed remote reservoir;

(B) keep all wash solvents in an enclosed reservoir that is covered at all times, except when being refilled with fresh solvents; and

(C) keep all waste solvents and other cleaning materials in closed containers.

(2) Each vehicle refinishing (body shop) operation shall use coating application equipment with a transfer efficiency of at least 65%, unless otherwise specified in an alternate means of control approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control). High-volume low-pressure (HVLP) spray guns are assumed to comply with the 65% transfer efficiency requirement.

(3) The following requirements apply to each wood furniture manufacturing facility subject to §115.421(a)(14) of this title (relating to Emission Specifications).

(A) No compounds containing more than 8.0% by weight of VOC shall be used for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, and/or metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished, that is, the spray booth coating or other material used to cover the booth is being replaced,

no more than 1.0 gallon of organic solvent shall be used to prepare the booth prior to applying the booth coating.

(B) Only normally closed containers shall be used for storage of finishing, cleaning, and washoff materials.

(C) Conventional air spray guns shall not be used for applying finishing materials except under one or more of the following circumstances:

(i) to apply finishing materials that have a VOC content no greater than 1.0 kilograms of VOC per kilogram of solids (1.0 pounds of VOC per pound of solids), as delivered to the application system;

(ii) for touch-up and repair under the following circumstances:

(I) the finishing materials are applied after completion of the finishing operation; or

(II) the finishing materials are applied after the stain and before any other type of finishing material is applied, and the finishing materials are applied from a container that has a volume of no more than 2.0 gallons.

(iii) if spray is automated, that is, the spray gun is aimed and triggered automatically, not manually;

(iv) if emissions from the finishing application station are directed to a vapor control system;

(v) the conventional air gun is used to apply finishing materials and the cumulative total usage of that finishing material is no more than 5.0% of the total gallons of finishing material used during that semiannual period; or

(vi) the conventional air gun is used to apply stain on a part for which:

(I) the production speed is too high or the part shape is too complex for one operator to coat the part and the application station is not large enough to accommodate an additional operator; or

(II) the excessively large vertical spray area of the part makes it difficult to avoid sagging or runs in the stain.

(D) All organic solvent used for line cleaning or to clean spray guns shall be pumped or drained into a normally closed container.

(E) Emissions from washoff operations shall be minimized by:

(i) using normally closed tanks for washoff; and

(ii) minimizing dripping by tilting or rotating the part to drain as much organic solvent as possible.

(4) The following requirements apply to each shipbuilding and ship repair surface coating facility subject to §115.421(a)(15) of this title.

(A) All handling and transfer of VOC-containing materials to and from containers, tanks, vats, drums, and piping systems shall be conducted in a manner that minimizes spills.

(B) All containers, tanks, vats, drums, and piping systems shall be free of cracks, holes, and other defects and remain closed unless materials are being added to or removed from them.

(C) All organic solvent used for line cleaning or to clean spray guns shall be pumped or drained into a normally closed container.

(5) The following requirements apply to each aerospace vehicle or component coating process subject to §115.421(a)(11) or (b)(10) of this title.

(A) One or more of the following application techniques shall be used to apply any primer or topcoat to aerospace vehicles or components: flow/curtain coating; dip coating; roll coating; brush coating; cotton-tipped swab application; electrodeposition coating; HVLP spraying; electrostatic spraying; or other coating application methods that achieve emission reductions equivalent to HVLP or electrostatic spray application methods, unless one of the following situations apply:

(i) any situation that normally requires the use of an airbrush or an extension on the spray gun to properly reach limited access spaces;

(ii) the application of specialty coatings;

(iii) the application of coatings that contain fillers that adversely affect atomization with HVLP spray guns and that the executive director has determined cannot be applied by any of the specified application methods;

(iv) the application of coatings that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.) and that the executive director has determined cannot be applied by any of the specified application methods in this subparagraph;

(v) the use of airbrush application methods for stenciling, lettering, and other identification markings;

(vi) the use of aerosol coating (spray paint) application methods; and

(vii) touch-up and repair operations.

(B) Cleaning solvents used in hand-wipe cleaning operations shall meet the definition of aqueous cleaning solvent in §115.420(b)(1)(I) of this title (relating to Surface Coating Definitions) or have a VOC composite vapor pressure less than or equal to 45 mm Hg at 20 degrees Celsius, unless one of the following situations apply:

(i) cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;

(ii) cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, hydrazine);

(iii) cleaning and surface activation prior to adhesive bonding;

(iv) cleaning of electronics parts and assemblies containing electronics parts;

(v) cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;

(vi) cleaning of fuel cells, fuel tanks, and confined spaces;

(vii) surface cleaning of solar cells, coated optics, and thermal control surfaces;

(viii) cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used on the interior of the aircraft;

(ix) cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;

(x) cleaning of aircraft transparencies, polycarbonate, or glass substrates;

(xi) cleaning and solvent usage associated with research and development, quality control, or laboratory testing;

(xii) cleaning operations, using nonflammable liquids, conducted within 5 feet of energized electrical systems. Energized electrical systems means any alternating current (AC) or direct current (DC) electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and

(xiii) cleaning operations identified as essential uses under the Montreal Protocol for which EPA has allocated essential use allowances or exemptions in 40 Code of Federal Regulations §82.4, including any future amendments promulgated by EPA.

(C) For cleaning solvents used in the flush cleaning of parts, assemblies, and coating unit components, the used cleaning solvent must be emptied into an enclosed container or collection system that is kept closed when not in use or captured with wipers provided they comply with the housekeeping requirements of subparagraph (E) of this paragraph. Aqueous and semiaqueous cleaning solvents are exempt from this subparagraph.

(D) All spray guns must be cleaned by one or more of the following methods:

(i) enclosed spray gun cleaning system provided that it is kept closed when not in use and leaks are repaired within 14 days from when the leak is first discovered. If the leak is not repaired by the 15th day after detection, the solvent shall be removed and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued;

(ii) unatomized discharge of solvent into a waste container that is kept closed when not in use;

(iii) disassembly of the spray gun and cleaning in a vat that is kept closed when not in use; or

(iv) atomized spray into a waste container that is fitted with a device designed to capture atomized solvent emissions.

(E) All fresh and used cleaning solvents used in solvent cleaning operations shall be stored in containers that are kept closed at all times except when filling or emptying. Cloth and paper, or other absorbent applicators, moistened with cleaning solvents shall be stored in closed containers. Cotton-tipped swabs used for very small cleaning operations are exempt from this subparagraph. In addition, the owner or operator must implement handling and transfer procedures to minimize spills during filling and transferring the cleaning solvent to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or used cleaning solvents. The requirements of this subparagraph are known collectively as housekeeping measures. Aqueous, semiaqueous, and hydrocarbon-based cleaning solvents, as defined in §115.420(b)(1) of this title, are exempt from this subparagraph.

(6) Any surface coating operation that becomes subject to the provisions of §115.421(a) of this title by exceeding the provisions of §115.427(a) of this title (relating to Exemptions) shall remain

subject to the provisions in §115.421(a) of this title, even if throughput or emissions later fall below exemption limits unless and until emissions are reduced to no more than the controlled emissions level existing before implementation of the project by which throughput or emission rate was reduced to less than the applicable exemption limits in §115.427(a) of this title, and

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

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

SUBCHAPTER E: SOLVENT-USING PROCESSES

DIVISION 4: OFFSET LITHOGRAPHIC PRINTING

§§115.440, 115.442, 115.445, 115.446

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.440. Offset Printing Definitions.

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

(1) **Alcohol** - An alcohol is any of the hydroxyl-containing organic compounds with a molecular weight equal to or less than 74.12 (which includes methanol, ethanol, propanol, and butanol).

(2) **Alcohol substitutes** - Nonalcohol additives that contain volatile organic compounds (VOC) and are used in the fountain solution. Some additives are used to reduce the surface tension of water; others (especially in the newspaper industry) are added to prevent piling (ink build-up).

(3) **Batch** - A supply of fountain solution that is prepared and used without alteration until completely used or removed from the printing process.

(4) **Cleaning solution** - Liquids used to remove ink and debris from the operating surfaces of the printing press and its parts.

(5) **Fountain solution** - A mixture of water, nonvolatile printing chemicals, and an additive (liquid) that reduces the surface tension of the water so that it spreads easily across the printing plate surface. The fountain solution wets the nonimage areas so that the ink is maintained within the image areas. Isopropyl alcohol, a VOC, is the most common additive used to reduce the surface tension of the fountain solution.

(6) **Heatset** - Any operation where heat is required to evaporate ink oil from the printing ink. Hot air dryers are used to deliver the heat.

(7) **Lithography** - A printing process where the image and nonimage areas are chemically differentiated; the image area is oil receptive, and the nonimage area is water receptive. This method differs from other printing methods, where the image is a raised or recessed surface.

(8) **Non-heatset** - Any operation where the printing inks are set without the use of heat. For the purposes of this division, ultraviolet-cured and electron beam-cured inks are considered non-heatset.

(9) **Offset lithography** - A printing process that transfers the ink film from the lithographic plate to an intermediary surface (blanket) which, in turn, transfers the ink film to the substrate.

(10) **VOC composite partial pressure** - The sum of the partial pressures of the compounds which meet the definition of volatile organic compound (VOC) in §101.1 of this title. The VOC composite partial pressure is calculated as follows.

Figure: 30 TAC §115.440(10)

$$PP_c = \sum_{i=1}^n \frac{\frac{W_i}{MW_i} \times VP_i}{\frac{W_w}{MW_w} + \sum_{e=1}^n \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

- W_i = Weight of the "i"th VOC compound, grams.
- W_w = Weight of water, grams (g).
- W_e = Weight of nonwater, non-VOC compound, g.
- MW_i = Molecular weight of the "i"th VOC compound, g/g-mole.
- MW_w = Molecular weight of water, g/g-mole.
- MW_e = Molecular weight of exempt compound, g/g-mole.
- PP_c = VOC composite partial pressure at 20 degrees Celsius, millimeters of mercury (mm Hg).
- VP_i = Vapor pressure of the "i"th VOC compound at 20 degrees Celsius, mm Hg.

§115.442. Control Requirements.

For the Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), the following control requirements shall apply.

- (1) No person shall operate or allow the operation of an offset lithographic printing line that uses solvent-containing ink, unless volatile organic compound (VOC) emissions are limited by the following.

(A) Any person who owns or operates a heatset web offset lithographic printing press that uses alcohol in the fountain solution shall maintain total fountain solution alcohol to 5.0% or less (by volume). Alternatively, a standard of 10.0% or less (by volume) alcohol may be used if the fountain solution containing alcohol is refrigerated to less than 60 degrees Fahrenheit.

(B) Any person who owns or operates a nonheatset web offset lithographic printing press which prints newspaper and that uses alcohol in the fountain solution shall eliminate the use of alcohol in the fountain solution. Non-alcohol additives or alcohol substitutes can be used to accomplish the total elimination of alcohol use.

(C) Any person who owns or operates a nonheatset web offset lithographic printing press which does not print newspaper and that uses alcohol in the fountain solution shall maintain the use of alcohol at 5.0% or less (by volume). Alternatively, a standard of 10.0% or less (by volume) alcohol may be used if the fountain solution is refrigerated to less than 60 degrees Fahrenheit.

(D) Any person who owns or operates a sheetfed offset lithographic printing press shall maintain the use of alcohol at 10.0% or less (by volume). Alternatively, a standard of 12.0% or less (by volume) alcohol may be used if the fountain solution is refrigerated to less than 60 degrees Fahrenheit.

(E) Any person who owns or operates any type of offset lithographic printing press shall be considered in compliance with the fountain solution limitations of this paragraph if the

only VOCs in the fountain solution are in nonalcohol additives or alcohol substitutes, so that the concentration of VOCs in the fountain solution is 3.0% or less (by weight). The fountain solution shall not contain any isopropyl alcohol.

(F) Any person who owns or operates an offset lithographic printing press shall reduce VOC emissions from cleaning solutions by one of the following methods:

(i) using cleaning solutions with a VOC content of 50% or less (by volume, as used);

(ii) using cleaning solutions with a VOC content of 70% or less (by volume, as used) and incorporating a towel handling program which ensures that all waste ink, solvents, and cleanup rags shall be stored in closed containers until removed from the site by a licensed disposal/cleaning service; or

(iii) using cleaning solutions with a VOC composite partial vapor pressure less than or equal to ten millimeters of mercury (mm Hg) at 20 degrees Celsius (68 degrees Fahrenheit).

(2) No person shall operate or allow the operation of a heatset offset lithographic printing press unless VOC emissions from the press dryer exhaust vent are reduced 90% by weight or a

maximum dryer exhaust outlet concentration of 20 parts per million by volume (ppmv) is maintained, whichever is less stringent when the press is in operation.

§115.445. Approved Test Methods.

For the Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), compliance shall be determined by applying the following test methods, as appropriate:

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

(2) Test Method 24 (40 CFR 60, Appendix A) for determining the volatile organic compound content and density of printing inks and related coatings;

(3) Test Method 25 (40 CFR 60, Appendix A) for determining total gaseous nonmethane organic emissions as carbon. To prevent condensation, the probe and filter should be heated to the gas stream temperature, typically closer to 350 degrees Fahrenheit;

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

(5) EPA guidelines series document "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings," EPA-450/3-84-019, as in effect December 1984; or

(6) additional performance test procedures described in 40 CFR §60.444 (effective October 18, 1983).

§115.446. Monitoring and Recordkeeping Requirements.

For the Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), the following monitoring and recordkeeping requirements shall apply.

(1) The owner or operator of a heatset offset lithographic printing press shall install, calibrate, maintain, and operate a temperature monitoring device, according to the manufacturer's instructions, at the outlet of the control device. The temperature monitoring device shall be equipped with a continuous recorder and shall have an accuracy of ± 0.5 degrees Fahrenheit, or alternatively $\pm 1.0\%$ of the temperature being monitored.

(2) The owner or operator of any offset lithographic printing press shall install and maintain monitors to continuously measure and record operational parameters of any emission control device installed to meet applicable control requirements on a regular basis. Such records must be sufficient to demonstrate proper functioning of those devices to design specifications, including:

(A) the exhaust gas temperature of direct-flame incinerators and/or the gas temperature immediately upstream and downstream of any catalyst bed;

(B) the total amount of volatile organic compound (VOC) recovered by a carbon adsorption or other solvent recovery system during a calendar month; and

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

(3) The dryer pressure shall be maintained lower than the press room air pressure such that air flows into the dryer at all times when the offset lithographic printing press is operating. A 100% emissions capture efficiency for the dryer shall be demonstrated using an air flow direction measuring device.

(4) The owner or operator of any offset lithographic printing press shall monitor fountain solution alcohol concentration with a refractometer or a hydrometer that is corrected for temperature at least once per eight-hour shift or once per batch, whichever is longer. The refractometer or hydrometer shall have a visual, analog, or digital readout with an accuracy of 0.5% VOC. A standard solution shall be used to calibrate the refractometer for the type of alcohol used in the fountain. The VOC content of the fountain solution may be monitored with a conductivity meter if it is determined that a refractometer or hydrometer cannot be used for the type of VOCs in the fountain

solution. The conductivity meter reading for the fountain solution shall be referenced to the conductivity of the incoming water.

(5) The owner or operator of any offset lithographic printing press using refrigeration equipment on the fountain solution in order to comply with §115.442(1)(A), (C), or (D) of this title (relating to Control Requirements) shall monitor the temperature of the fountain solution reservoir at least once per hour. Alternatively, the owner or operator of any offset lithographic printing press using refrigeration equipment on the fountain solution shall install, maintain, and continuously operate a temperature monitor of the fountain solution reservoir. The temperature monitor shall be attached to a continuous recording device such as a strip chart, recorder, or computer.

(6) For any offset lithographic printing press with automatic cleaning equipment, flow meters are required to monitor water and cleaning solution flow rates. The flow meters shall be calibrated so that the VOC content of the mixed solution complies with the requirements of §115.442 of this title.

(7) The owner or operator of any offset lithographic printing press shall maintain the results of any testing conducted at an affected facility in accordance with the provisions specified in §115.445 of this title (relating to Approved Test Methods).

(8) The owner or operator of any offset lithographic printing press shall maintain all records at the affected facility for at least two years and make such records available upon request to

representatives of the executive director, EPA, or any local air pollution agency having jurisdiction in the area.

SUBCHAPTER F: MISCELLANEOUS INDUSTRIAL SOURCES

DIVISION 2: PHARMACEUTICAL MANUFACTURING FACILITIES

§§115.532, 115.533, 115.535, 115.539

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of the TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.532. Control Requirements.

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the owner or operator of a synthesized pharmaceutical manufacturing facility shall provide the following specified controls.

- (1) Tanks.

(A) All in-process tanks that contain volatile organic compounds (VOC) at any time shall be kept covered, except when production, sampling, maintenance, or inspection procedures require operator access.

(B) All storage tanks that store VOC shall have pressure vacuum conservation vents installed which are set at plus or minus 0.8 inches of water (plus or minus 0.2 kPa), unless a more effective control system is used.

(2) Centrifuges and filters. Centrifuges, rotary vacuum filters, and other filters having an exposed liquid surface which process liquids containing VOC shall be enclosed.

(3) Leaks.

(A) All liquid leaks containing VOC from a process unit or storage tank shall be repaired the first time the equipment is off-line long enough to complete the repair.

(B) All liquid or gaseous leaks of VOC observed during loading operations shall be repaired immediately. Loading operations shall be discontinued until the leak is repaired.

(4) Air dryers, production equipment exhaust systems, and loading facilities. Sources affected by §115.531(a) of this title (relating to Emission Specifications) shall be controlled by a system with a reduction efficiency of at least 90% of the uncontrolled emissions.

(5) Pharmaceutical manufacturing facility. Any pharmaceutical manufacturing facility that becomes subject to the provisions of paragraphs (1) - (4) of this subsection by exceeding provisions of §115.537(a) of this title (relating to Exemptions) will remain subject to the provisions of this subsection, even if throughput or emissions later fall below exemption limits, unless and until emissions are reduced to no more than the controlled emissions level existing before implementation of the project by which throughput or emission rate was reduced to less than the applicable exemption limits in §115.537(a) of this title; and:

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

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

(b) For Gregg, Nueces, and Victoria Counties, the owner or operator of a synthesized pharmaceutical manufacturing facility shall provide the following specified controls.

(1) Tanks.

(A) All in-process tanks that contain VOC at any time shall be kept covered, except when production, sampling, maintenance, or inspection procedures require operator access.

(B) All storage tanks that store VOC shall have pressure vacuum conservation vents installed which are set at plus or minus 0.8 inches of water (plus or minus 0.2 kPa), unless a more effective control system is used.

(2) Centrifuges and filters. Centrifuges, rotary vacuum filters, and other filters having an exposed liquid surface which process liquids containing VOC shall be enclosed.

(3) Leaks.

(A) All liquid leaks containing VOC from a process unit or storage tank shall be repaired the first time the equipment is off-line long enough to complete the repair.

(B) All liquid or gaseous leaks of VOC observed during loading operations shall be repaired immediately. Loading operations shall be discontinued until the leak is repaired.

(4) Air dryers, production equipment exhaust systems, and loading facilities. Sources affected by §115.531(b) of this title shall be controlled by a system with a reduction efficiency of at least 90% of the uncontrolled emissions.

§115.533. Alternate Control Requirements.

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

§115.535. Testing Requirements.

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, compliance with this division (relating to Pharmaceutical Manufacturing Facilities) shall be determined by applying the following test methods, as appropriate:

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

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

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

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

(5) determination of true vapor pressure using American Society of Testing and Materials (ASTM) Test Method D323-82 for the measurement of Reid vapor pressure, adjusted for actual storage temperature in accordance with API Publication 2517, Third Edition, 1989; or

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

(b) For Gregg, Nueces, and Victoria Counties, compliance with this division shall be determined by applying the following test methods, as appropriate:

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

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

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

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

(5) determination of true vapor pressure using ASTM Test Method D323-82 for the measurement of Reid vapor pressure, adjusted for actual storage temperature in accordance with API Publication 2517, Third Edition, 1989; or

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

§115.539. Counties and Compliance Schedules.

All affected persons 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 Pharmaceutical Manufacturing Facilities) as required by §115.930 of this title (relating to Compliance Dates).

SUBCHAPTER F: MISCELLANEOUS INDUSTRIAL SOURCES

**DIVISION 3: DEGASSING OR CLEANING OF STATIONARY, MARINE,
AND TRANSPORT VESSELS**

§§115.541 - 115.543, 115.545 - 115.547, 115.549

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.541. 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 to degassing during or in preparation of cleaning.

(1) For all stationary volatile organic compound (VOC) storage tanks with a nominal storage capacity of one million gallons or more.

(A) No person shall permit VOC emissions with a vapor space partial pressure greater than or equal to 0.5 pounds per square inch absolute (psia) (3.4 kPa) under actual storage conditions unless the vapors are processed by a vapor control system.

(B) The vapor control system shall maintain a control efficiency of at least 90%.

(C) When conducting degassing or cleaning operations, no avoidable liquid or gaseous leaks, as detected by sight or sound, shall originate from the degassing or cleaning operations.

(D) The intentional bypassing of a vapor control device used during degassing or cleaning is prohibited. Any visible VOC leak originating from the vapor control device or other associated product recovery device shall be repaired as soon as practical.

(2) For all transport vessels, as defined in §115.10 of this title, with a nominal storage capacity of 8,000 gallons or more.

(A) No person shall permit VOC emissions with a vapor space partial pressure greater than or equal to 0.5 psia (3.4 kPa) under actual storage conditions unless the vapors are processed by a vapor control system.

(B) The vapor control system shall maintain a control efficiency of at least 90%.

(C) When conducting degassing or cleaning operations, no avoidable liquid or gaseous leaks, as detected by sight or sound, shall originate from the degassing or cleaning operations.

(D) The intentional bypassing of a vapor control device used during degassing or cleaning is prohibited. Any visible VOC leak originating from the vapor control device or other associated product recovery device shall be repaired as soon as practical.

(E) All transport vessels, as defined in §115.10 of this title, shall be kept vapor-tight at all times until the VOC vapors remaining in the vessel are discharged to a vapor control system.

(b) For all persons in the Beaumont/Port Arthur and Houston/Galveston areas, the following emission specifications shall apply to degassing during or in preparation of cleaning for all marine vessels, as defined in §101.1 of this title (relating to Definitions), which have a nominal storage capacity of 10,000 barrels (420,000 gallons) or more and contain VOCs.

(1) No person shall degas or clean a tank that carried a VOC with a vapor partial pressure greater than or equal to 0.5 pounds per square inch absolute (3.4 kPa) unless the vapors are processed by a vapor control system.

(2) The vapor control system shall maintain a control efficiency of at least 90%.

(3) When conducting degassing or cleaning operations, no avoidable liquid or gaseous leaks, as detected by sight or sound, shall originate from the degassing or cleaning operations.

(4) The intentional bypassing of a vapor control device used during degassing or cleaning is prohibited. Any visible VOC leak originating from the vapor control device or other associated product recovery device shall be repaired as soon as possible.

(5) All marine vessels, as defined in §101.1 of this title, containing VOCs shall have all cargo tank closures properly secured, or maintain a negative pressure within the tank when a closure is opened, and shall have all pressure/vacuum relief valves operating within certified limits as specified by classification society or flag state until the vapors are discharged to a vapor control system if the vessel is degassed or cleaned.

§115.542. 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 to stationary storage tanks and transport vessels.

(1) No person shall permit the degassing or cleaning of volatile organic compounds (VOC) from a stationary storage tank or transport vessel unless the vapors are processed by a vapor control system.

(2) When degassing or cleaning is effected through the hatches of a transport vessel with a loading arm equipped with a vapor collection adapter, then pneumatic, hydraulic, or other mechanical means shall be provided to force a vapor-tight seal between the adapter and the hatch. A means shall be provided to minimize liquid drainage from the degassing or cleaning device when it is removed from the hatch of any transport vessel or to accomplish drainage before such removal.

(3) When degassing or cleaning is effected through the hatches or manways of stationary VOC storage tanks, all lines shall be equipped with fittings which make vapor-tight connections and which are closed when disconnected; or equipped to permit residual VOC in the line to discharge into a recovery or disposal system after degassing or cleaning is complete.

(4) Degassing and cleaning equipment shall be designed and operated to prevent avoidable VOC leaks.

(5) Vapors shall be routed to the control device until a turnover of at least four vapor space volumes has occurred, or four turnovers of the vapor space under a floating roof, or the partial vapor pressure is less than 0.5 psia (19,000 ppmw, or 34,000 ppmv expressed as methane). After one of these conditions has been satisfied, the storage vessel may be vented to the atmosphere for the remainder of the degassing or cleaning process.

(b) For all persons in the Beaumont/Port Arthur and Houston/Galveston areas, the following control requirements shall apply to marine vessels.

(1) No person shall permit the degassing or cleaning of a marine vessel containing VOCs unless the vapors are processed by a vapor control system.

(2) When degassing or cleaning is effected through the hatches of a marine vessel containing VOCs with a loading arm equipped with a vapor collection adapter, then pneumatic, hydraulic, or other mechanical means shall be provided to force a vapor-tight seal between the adapter and the hatch, or a negative pressure inside the cargo tank shall be maintained. A means shall be provided to minimize liquid drainage from the degassing or cleaning device and line when they are removed from the hatch of any marine vessel containing VOCs or to accomplish drainage before such removal.

(3) Degassing and cleaning equipment must be designed and operated to prevent avoidable VOC leaks.

(4) Vapors shall be routed to the control device until the marine vessel is stripped VOC liquid-free and a turnover of at least four vapor space volumes has occurred, the partial vapor pressure is less than 0.5 psia (19,000 ppmw, or 34,000 ppmv expressed as methane), or the concentration of VOC is less than 20% of the lower explosive limit (LEL). After one of these conditions has been satisfied, the marine vessel may be vented to the atmosphere for the remainder of the degassing or cleaning process.

§115.543. Alternate Control Requirements.

For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division (relating to Degassing or Cleaning of Stationary, Marine, and Transport Vessels) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.

§115.545. Approved Test Methods.

For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, compliance with §115.541 and §115.542 of this title (relating to Emission Specifications and Control Requirements) shall be determined by applying the following test methods, as appropriate:

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

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

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

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

(5) additional test procedures described in 40 CFR §60.503 b, c, and d (effective February 14, 1989) for determining compliance for bulk gasoline terminals;

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

(7) determination of true vapor pressure using ASTM Test Method D323-89, D2879, D4953, D5190, or D5191 for the measurement of Reid vapor pressure, adjusted for actual storage temperature in accordance with API Publication 2517, Third Edition, 1989;

(8) Test Method 27 (40 CFR 60, Appendix A) for determining tank-truck leaks;

(9) 40 CFR §63.565(c) (effective September 19, 1995) or 40 CFR §61.304(f) (effective October 17, 2000) for determination of marine vessel vapor tightness; or

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

§115.546. Monitoring and Recordkeeping Requirements.

For facilities in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas affected by §115.541 and §115.542 of this title (relating to Emission Specifications and Control Requirements), the owner or operator of any volatile organic compound (VOC) degassing or cleaning facility shall maintain the following information at the facility for at least two years and shall make such information available upon request to representatives of the executive director, EPA, or any local air pollution control agency having jurisdiction in the area:

(1) for vessel degassing or cleaning operations:

(A) a record of the type and number of all transport vessels, stationary VOC storage tanks, and marine vessels which are degassed or cleaned at the affected facility;

(B) the chemical name and estimated liquid quantity of VOC contained in each vessel prior to degassing or cleaning; and

(C) the chemical name and estimated liquid quantity of VOC removed from each vessel;

(2) for vapor control systems:

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

(B) continuous monitoring and recording of the inlet and outlet gas temperature of a catalytic incinerator; and

(C) continuous monitoring and recording of the exhaust gas VOC concentration for carbon adsorption systems that contain facilities to regenerate the carbon bed directly, as defined in §115.10 of this title (relating to Definitions); or periodic monitoring of the exhaust gas VOC as

specified by 40 Code of Federal Regulations §61.354(d) (effective October 17, 2000), of any carbon adsorption system that does not regenerate the carbon bed directly, to determine breakthrough;

(3) the results of any leak inspection and repair conducted in accordance with the provisions specified in §115.544 of this title (relating to Inspection Requirements); and

(4) the results of any testing conducted in accordance with the provisions specified in §115.545 of this title (relating to Approved Test Methods).

§115.547. Exemptions.

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 exemptions apply.

(1) Degassing or cleaning any vessel with a vapor space partial pressure less than 0.5 pounds per square inch absolute (3.4 kPa) of volatile organic compound (VOC) under actual storage conditions is exempt from the requirements of this division (relating to Degassing or Cleaning of Stationary, Marine, and Transport Vessels).

(2) Degassing or cleaning any transport vessel with a nominal storage capacity of less than 8,000 gallons, or any stationary VOC storage tank with a nominal storage capacity of less than 1

million gallons, or any marine vessel with a nominal storage capacity of less than 10,000 barrels (420,000 gallons), is exempt from the requirements of this division.

(3) Any stationary VOC storage tank during preventative maintenance, roof repair, primary seal inspection, or removal and installation of a secondary seal, if product is not moved in or out of the storage tank, emissions are minimized, and the repair is completed within seven calendar days, is exempt from the requirements of this division.

(4) Any marine vessel which has sustained damage which prevents a cargo tank's opening from being properly secured, the onboard vapor recovery system to be inoperative, or the pressure/vacuum relief valves from operating within certified limits as specified by classification society or flag state is exempt from §115.541(b) and §115.542(b) of this title (relating to Emission Specifications and Control Requirements); however, all reasonable measures shall be taken to minimize VOC emissions.

(5) Any oceangoing, self-propelled marine vessel is exempt from the degassing or cleaning requirements of this division.

§115.549. Counties and Compliance Schedules.

(a) All affected persons in the Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, and Waller Counties shall continue to comply with this

division (relating to Degassing or Cleaning of Stationary, Marine, and Transport Vessels) as required by §115.930 of this title (relating to Compliance Dates).

(b) All affected persons in Collin, Dallas, Denton, and Tarrant Counties shall be in compliance with this division as soon as practicable, but no later than one year, after the commission publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the national ambient air quality standard (NAAQS) for ozone by the attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the Federal Clean Air Act (FCAA), §172(c)(9).

(c) All affected persons in El Paso County shall be in compliance with this division as soon as practicable, but no later than one year, after the commission publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the NAAQS for ozone by the attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the FCAA, §172(c)(9).

SUBCHAPTER F: MISCELLANEOUS INDUSTRIAL SOURCES

DIVISION 4: PETROLEUM DRY CLEANING SYSTEMS

§115.552, §115.559

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.552. Control Requirements.

(a) For the Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), the owner or operator of any dry cleaning facility which uses petroleum-based solvents shall not operate the facility unless the following requirements are satisfied.

(1) Dryers. The owner or operator of a dry cleaning facility shall either:

(A) install, maintain, and operate a solvent-recovery dryer that recovers at least 85% by weight of the used petroleum solvent;

(B) install, maintain, and operate a petroleum dry-to-dry dryer that recovers at least 85% by weight of the used petroleum solvent; or

(C) route the exhaust air stream from the standard dryer to any other properly functioning control device which reduces the total emissions of volatile organic compounds (VOC) to the atmosphere by at least 85% by weight.

(2) Filtration systems. The owner or operator of a petroleum solvent filtration system shall either:

(A) install, maintain, and operate a cartridge filtration system according to the manufacturer's recommendations. The owner or operator shall drain all filter cartridges in their closed housings for at least eight hours before their removal; or

(B) maintain and operate a regenerative filter or any other filtration medium according to the manufacturers' recommendations. The owner or operator shall drain the filter medium in its closed housing for at least eight hours before its removal. Upon removal, the owner or operator shall directly place the filter medium in disposable vapor tight containers or bags and shall keep these containers or bags vapor tight at all times until they are properly landfilled.

(3) Fugitive emissions. The owner or operator shall ensure that:

(A) there are no visual, audible, or smellable leaks from any portion of the dry cleaning equipment. Visual inspection of all equipment and system components shall be conducted at least weekly;

(B) all washer and dryer traps, access doors, and other parts of the equipment where solvent may be exposed to the atmosphere are kept closed at all times except when required for proper operation or maintenance;

(C) all solvent-contaminated waste materials are stored in closed containers prior to proper disposal;

(D) repair of any visual, audible, or olfactory leak in any portion of the equipment shall be completed within three working days from the time the leak is detected. If necessary repair parts are not on hand, the owner or operator shall order the necessary parts within three working days and shall repair the leak no later than three working days after the parts arrive.

(b) Any petroleum solvent dry cleaning facility that becomes or is currently subject to the control requirements of subsection (a) of this section by exceeding the exemption limit of §115.157 of this title (relating to Exemptions) shall remain subject to the provisions of this section, even if its consumption of petroleum solvent later falls below the exemption level, unless and until its uncontrolled

solvent consumption is reduced to no more than its solvent consumption level before lifting controls;
and:

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

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

§115.559. Counties and Compliance Schedules.

(a) All affected petroleum solvent dry cleaning facilities in Collin, Dallas, Denton, and Tarrant Counties shall be in compliance with this division (relating to Petroleum Dry Cleaning Systems) as soon as practicable, but no later than one year, after the commission publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the national ambient air quality standard (NAAQS) for ozone by the attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the Federal Clean Air Act, §172(c)(9).

(b) All affected petroleum solvent dry cleaning facilities in El Paso County shall be in compliance with §§115.552, 115.553, and 115.555-115.557 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 1990 Amendments to the Federal Clean Air Act, §172(c)(9).

(c) All affected petroleum solvent dry cleaning facilities in Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, and Waller Counties shall be in compliance with §§115.552, 115.553, and 115.555-115.557 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 1990 Amendments to the Federal Clean Air Act, §172(c)(9).

(d) Any petroleum solvent dry cleaning facility that becomes subject to the control requirements of §115.552(a)(1) of this title by exceeding the exemption threshold as identified in §115.557 of this title shall be in compliance as soon as practicable, but no later than two years from the time the exemption level was exceeded.

SUBCHAPTER J: ADMINISTRATIVE PROVISIONS

DIVISION 1: ALTERNATE MEANS OF CONTROL

§§115.910 - 115.916

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.910. Availability of Alternate Means of Control.

(a) Any person affected by a control requirement and/or emission specification of this chapter may request approval of an alternate means of control (AMOC) plan using the procedures established in §115.913 of this title (relating to Procedures for Alternate Means of Control Plan Submittal). Such AMOC plan shall be approved if it is demonstrated that the plan meets all applicable criteria and procedures of §§115.911 - 115.913, 115.915, and 115.916 of this title (relating to Criteria for Approval

of Alternate Means of Control Plans; Calculations for Determining Alternate Means of Control Reductions; Procedures for Alternate Means of Control Plan Submittal; Public Notice Format; and Review of Approved Alternate Means of Control Plans and Termination of Alternate Means of Control Plans). The AMOC plans not satisfying the requirements of this division (relating to Alternate Means of Control) may apply for a site-specific State Implementation Plan revision approved by the executive director and EPA.

(b) An AMOC applicant may apply to the executive director for a waiver of portions of §115.913 of this title which may not apply to a single-source AMOC application and for §115.914 and §115.915 of this title (relating to Procedures for an Alternate Means of Control Plan Approval; and Public Notice Format). A single-source AMOC application is one that proposes only the substitution of one control device for another.

(c) Application for an AMOC plan does not stay enforcement of regulations of this chapter.

(d) Any violation of an AMOC plan shall be subject to enforcement action as a violation of this chapter.

§115.911. Criteria for Approval of Alternate Means of Control Plans.

An alternate means of control (AMOC) plan shall be approved if it meets each of the following criteria, as applicable.

(1) All facilities covered by the AMOC plan are and remain in the same account number.

(2) The AMOC plan must propose annual emission limits in tons per year for each source in the AMOC plan that, when collectively compared against actual annual emissions generated in 1990 (or subsequent years if a source in an AMOC was not operational prior to 1990), result in net emissions reductions equal to or greater than reductions that would be achieved if each source complied with all applicable requirements of this chapter.

(3) If the AMOC plan involves any source with a proposed annual emission limit which exceeds the baseline as defined in §115.912(a) of this title (relating to Calculations for Determining Alternate Means of Control Reductions), the AMOC plan must provide additional reductions made at alternative sources which comply with the guidelines in §115.912 of this title and are at least equal to the amount the source exceeds its baseline, multiplied by the applicable factor provided in the following subparagraphs.

(A) For sources located in the Beaumont/Port Arthur area, the applicable factor is 1.2.

(B) For sources located in the Dallas/Fort Worth area, the applicable factor is 1.15.

(C) For sources located in the El Paso area, the applicable factor is 1.2.

(D) For sources located in the Houston/Galveston area, the applicable factor is 1.3.

(E) For sources located in other areas in Texas, the applicable factor is 1.1.

(4) The AMOC application must demonstrate that the sum of the maximum daily potentials to emit from the sources subject to the proposed AMOC plan shall not be more than 200 pounds per day greater than the sum of the maximum daily potentials to emit from those sources if the emissions were controlled in accordance with this chapter. For each nonattainment area, the executive director shall establish a limit upon the sum of the increases of the maximum daily potentials to emit from all AMOC plans in the nonattainment area. The limit shall be set so that the sum of the maximum daily potentials to emit shall not increase the measurable or modeled ozone level by one part per billion.

(5) The AMOC must be implemented and reductions created after January 1, 1991.

(6) Reductions in actual emissions accounted for in the AMOC plan must be surplus and remain surplus to reductions required by this chapter and any netting or offsetting requirements of §§116.150, 116.151, 116.160, and 116.161 of this title (relating to New Major Source or Major Modification in Ozone Nonattainment Areas; New Major Source or Major Modification in Nonattainment Area Other Than Ozone; Prevention of Significant Deterioration Requirements; and

Source Located in an Attainment Area with a Greater Than De Minimis Impact). Reductions for which the state has claimed credit in a State Implementation Plan may not be utilized as reductions in an AMOC plan.

(7) Mobile sources and indirect sources (Federal Clean Air Act, §110(a)(5)(C)) shall not be included in the AMOC plan.

(8) For purposes of demonstrating reductions and establishing emission limits in any AMOC plan, quantification of emissions must be accomplished using any of the following methods as specified by the executive director:

(A) test methods approved by the executive director for the direct measurement of emissions, either continuously or periodically;

(B) calculation equations which are a function of process or control system parameters, activity levels, and/or throughput or production rates;

(C) mass-balance calculations which are a function of inventory, usage, and/or disposal records;

(D) other appropriate methods acceptable to the executive director; or

(E) any combination of these approaches.

(9) The AMOC plan must establish emission limits and/or control requirements for all sources in the plan which render the proposed annual emission limits enforceable.

(10) The AMOC plan must include all necessary and appropriate provisions for monitoring, testing, reporting, and recordkeeping as specified by the executive director. The frequency of AMOC required monitoring, testing, reporting, and recordkeeping shall be sufficient to reasonably ensure compliance with applicable emission limits and/or control requirements. The monitoring, testing, reporting, and recordkeeping shall be at least as reliable, readily retrievable, and retained for a comparable period of time as the underlying requirements of this chapter.

(A) If this chapter includes monitoring, testing, reporting, and/or recordkeeping requirements for sources of the type(s) to be covered by an alternate emission limitation and/or control requirement, then such requirement may be used to render the AMOC plan enforceable. If this chapter does not include readily transferable monitoring, testing, reporting, and/or recordkeeping requirements for sources of the type(s) to be covered by an alternate emission limitation and/or control requirement, then priority may be given to any such set of requirements adopted under other commission rules for the control of volatile organic compounds (VOC) emissions from sources of the type(s) to be covered by an alternate emission limitation and/or control requirement.

(B) If this chapter includes emission limits and/or control requirements for sources of the type(s) to be covered by an alternate emission limitation and/or control requirement, then such alternative emission limitation and/or control requirement may be based on the same averaging time as is applied to those same type sources under this chapter. If this chapter does not include emission limitations and/or control requirements for sources of the type(s) to be covered by an alternate emission limit and/or control requirement, then priority may be given to averaging times for emission limits and/or control requirements on similar units governed by other commission rules limiting VOC emissions from sources of the type(s) to be covered by an alternate emission limit and/or control requirement.

(C) If no such commission monitoring, testing, reporting, and/or recordkeeping rules have been adopted that satisfy the criteria of subparagraphs (A) and (B) of this paragraph, then such requirements or averaging times shall be established on a case-by-case basis.

(D) Additional or more frequent monitoring, testing, reporting, and/or recordkeeping may be required by the executive director to ensure the integrity of any AMOC plan.

§115.912. Calculations for Determining Alternate Means of Control Reductions.

(a) For purposes of this section, a source's baseline is defined as the annual emissions that are calculated assuming full compliance with the adopted requirements of this chapter and using data

representative of actual operations in 1990 or thereafter for all variables necessary to calculate annual emissions for the identified source.

(1) For an alternate means of control (AMOC) application exclusively utilizing a source that existed prior to January 1, 1990, the AMOC application shall use data representative of actual operations in 1990.

(2) For an AMOC application utilizing a source that was created on or after January 1, 1990, the AMOC application shall use data representative of actual operations for the two years prior to the application for the AMOC, or other representative years, as determined by the executive director.

(3) For an AMOC application utilizing a source exempted from this chapter or with no applicable adopted requirements, or for a source whose actual annual emissions were less than the annual emissions calculated assuming full compliance with the adopted requirements, calculations will be based on actual annual emissions.

(b) The AMOC applicant shall determine annual emissions limits for each source included in the AMOC plan by utilizing the best available data and good engineering practice, which may include the use of statistical techniques to address variations in the data.

(c) For any source not controlled as otherwise specifically required by this chapter where an applicable adopted requirement exists, the AMOC applicant shall calculate credits needed by subtracting

the source's baseline from the source's annual emissions limit under the AMOC plan. This difference shall then be multiplied by the appropriate factor in §115.911(3) of this title (relating to Criteria for Approval of Alternate Means of Control Plans), to determine the credits that must be generated by other sources.

(d) For a source controlled beyond the requirements of this chapter, or for a source exempted from or with no applicable adopted control requirement in this chapter, the AMOC applicant shall calculate the amount of emission reduction credits generated by subtracting the source's annual emissions limit under the AMOC plan from the source's baseline, less any reductions that are generated for purposes discussed in §115.911(6) of this title.

(e) For all sources included in the AMOC plan, the AMOC applicant will sum the total of credits needed and the total of credits generated to establish that the credits generated exceed the credits needed.

(f) The maximum potential to emit shall be the maximum daily emissions that the source could emit subject to any physical, operational and regulatory limitations.

§115.913. Procedures for Alternate Means of Control Plan Submittal.

(a) All persons requesting an alternate means of control (AMOC) plan as provided by §115.910 of this title (relating to Availability of Alternate Means of Control) shall submit a proposed AMOC plan

and demonstration to the executive director; copies of such plan and demonstration to the appropriate regional office; copies to any local air pollution control program with jurisdiction over the account affected by the AMOC plan; and copies to the EPA regional office.

(b) The proposed AMOC plan shall include the following information:

(1) the AMOC applicant name with mailing address, site name with physical address, account number, and contact person including address and telephone number;

(2) an identification and a description of the sources involved in the AMOC plan including any applicable air permit numbers, plot plans, detailed flow diagrams, emission point numbers (EPNs), and facility identification numbers (FINs); an identification of the provisions of this chapter that are applicable to such sources; and an identification of promulgated provisions of this chapter that will be applicable to such sources; and a description of normal operating conditions for each source causing emissions;

(3) a quantification of the AMOC plan sources' actual emissions for the selected year;

(4) a quantification of annual emission limits and daily maximum potential emissions from all sources affected by the AMOC showing the difference between projected emissions from the affected source(s) without the AMOC plan and projected emissions resulting under the proposed AMOC plan. These calculations shall be done in accordance with the requirements of §115.912 of this title

(relating to Calculations for Determining Alternate Means of Control Reductions). Assumptions and emission factors utilized in the calculations shall be included;

(5) a specification of emission limitation(s) and control requirement(s) to be applicable to each source affected by the proposed AMOC plan. Emission limitations shall include actual annual emission limits in tons per year for each source. Control requirements must be established for each source to make annual emission limits enforceable;

(6) a description of the compliance methodologies, including monitoring, testing, reporting, and recordkeeping measures, that will be used to enforce the emission limitation(s) and/or control requirement(s) applicable to each source affected by the AMOC plan;

(7) a sample of reporting and recordkeeping forms to be utilized;

(8) a demonstration that the AMOC plan satisfies each applicable requirement of §115.911 of this title (relating to Criteria for Approval of Alternative Means of Control Plans);

(9) a list containing the name, address, and telephone number of any air pollution control program with jurisdiction over the account affected by the AMOC plan; and

(10) any other relevant information necessary to evaluate the merits and/or enforceability of the AMOC plan, as may be requested by the executive director.

(c) All representations with regard to the AMOC plan, as well as any provisions attached to the AMOC plan, become conditions upon which the subsequent AMOC plan is issued. It shall be unlawful for any person to vary from such representation or provision if the change will cause a change in the method of control of emissions, the character of the emissions, or will result in an increase in the discharge of the various emissions. It shall also be unlawful for any AMOC holder to vary from the emission limits, control requirements, monitoring, testing, reporting, or recordkeeping requirements of an approved AMOC plan.

(d) Applications to amend or revise an AMOC plan shall be submitted subject to the requirements of this chapter.

§115.914. Procedures for an Alternate Means of Control Plan Approval.

Upon a preliminary determination to approve or deny the proposed alternative means of control (AMOC) plan, the executive director shall, in writing, so notify the submitter of the plan, any local air pollution control program with jurisdiction over the account affected by the AMOC plan, and the EPA regional office.

(1) If the executive director makes a preliminary determination to approve the AMOC plan, then this notice shall include a copy of the AMOC plan as preliminarily approved.

(2) If the executive director makes a determination to deny the AMOC plan, then the notice shall include a description of the reasons for such determination of denial. This determination shall constitute a final action of the executive director appealable to the commission as provided in paragraph (7) of this section.

(3) Upon receipt of notice from the executive director that the AMOC plan has received preliminary approval, the AMOC applicant, at the applicant's own expense, shall cause to be published notice of the applicant's intent to obtain an AMOC plan and of the opportunity to submit written comments. Notice shall be consistent with §115.915 of this title (relating to Public Notice Format).

(4) The executive director shall consider and prepare a written response to all significant and timely written comments filed in connection with an AMOC plan.

(5) In response to the written comments, the executive director may modify the provisions of the AMOC plan, deny the AMOC plan, or approve the AMOC plan without changes.

(6) The executive director shall send written notice of his/her final determination concerning each AMOC plan to the submitter of the plan, the EPA regional office, any local pollution control program with jurisdiction over the account affected by the AMOC plan, and to each person who submitted timely written comments. Such notice shall include final AMOC plan provisions, a copy of the response to comments, and an announcement of the opportunity to appeal the executive director's

determination to the commission. The notice required by this subsection shall be sent by a means evidencing receipt.

(7) Any person entitled to notice under paragraph (6) of this section may, within 15 days of the receipt of such notice, file with the executive director an appeal of the final determination on the AMOC plan. Such appeal shall be considered at the next regularly scheduled meeting of the commission for which adequate notice may be made. Based on arguments submitted to the commission during such appeal, the commission may remand the AMOC determination to the executive director, deny the AMOC plan, or issue the AMOC plan unchanged.

(8) Within 45 days of final approval of the AMOC plan by the executive director, EPA may notify the commission of EPA's disapproval of the executive director's final decision. Such notification shall be in writing and shall include a statement of the reason(s) for the disapproval and a specific listing of changes to the AMOC plan that must be made in order to overcome the disapproval. Any time prior to the expiration of the 45-day period, EPA may notify the executive director that no disapproval is forthcoming. Upon receipt of a timely EPA disapproval, the executive director shall void or revise the AMOC plan, and reissue the notice as required by paragraph (6) of this section.

(9) If no appeal of the executive director's decision to approve the AMOC plan is filed pursuant to paragraph (7) of this section, the AMOC plan becomes effective upon the acceptance of the plan by EPA as described in paragraph (11) of this section.

(10) If an appeal of the executive director's decision is filed, the AMOC plan becomes effective upon the latter of the acceptance of the AMOC plan by the commission or the acceptance of the AMOC plan by EPA.

(11) EPA acceptance is defined as explicit approval of the AMOC plan by EPA, notification by EPA to the executive director that no EPA disapproval is forthcoming, or failure of EPA to file notice of disapproval within 45 days after the executive director's final decision to approve the AMOC plan.

§115.915. Public Notice Format.

(a) Public notice shall be published in the public notice section of two successive issues of a newspaper of general circulation in or closest to the municipality in which the facility with the account affected by the alternative means of control (AMOC) plan is located.

(b) Public notice shall contain the following information:

(1) AMOC plan application number assigned by the executive director;

(2) AMOC applicant name;

(3) type of facility;

- (4) a description of the location of the facility;
- (5) a brief description of the AMOC plan;
- (6) the executive director's preliminary determination to approve such plan;
- (7) the locations and availability of copies of the proposed AMOC plan, related documentation, and the executive director's preliminary analysis of the plan (including the Austin and appropriate regional offices, any local pollution control program with jurisdiction over the account affected by the AMOC plan, and the EPA regional office);
- (8) an announcement of the opportunity to submit written comments on the AMOC plan;
- (9) the length of the public comment period (30 days from the final publication of this notice);
- (10) the procedure for submission of written public comments concerning the proposed AMOC plan; and
- (11) the name, address, and phone number of the regional office to be contacted for further information.

(c) The AMOC plan submitter shall provide proof of adequate notice to the executive director, EPA, and any local pollution control program with jurisdiction over the account affected by the AMOC plan before the executive director may take final action on the AMOC plan.

§115.916. Review of Approved Alternate Means of Control Plans and Termination of Alternate Means of Control Plans.

(a) For the purposes of this division (relating to Alternate Means of Control), "compliance date" shall mean the date by which a source must comply with new or modified sections of this chapter.

(b) Unless revised to reflect new regulatory requirements, an alternative means of control (AMOC) plan becomes void on the compliance date specified for a new or modified section of this chapter affecting a source subject to an AMOC plan.

(c) The holder of an AMOC plan shall comply with the requirements of this chapter if the AMOC plan becomes void.

(d) Upon final approval of an AMOC plan, the owner or operator of the facilities affected by such plan shall keep a copy of the plan on the site affected by the plan and shall make the plan available upon request to representatives of the executive director, EPA, or any local air pollution control agency having jurisdiction in the area.

(e) Upon request, each holder of an AMOC plan shall submit to the executive director a demonstration that the plan continues to meet all applicable criteria of this division.

(f) An AMOC holder is responsible for obtaining a new AMOC plan prior to the compliance date of any new or modified regulation of this chapter that affects a source subject to an AMOC plan.

SUBCHAPTER J: ADMINISTRATIVE PROVISIONS

DIVISION 2: EARLY REDUCTIONS

§115.920, §115.923

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.920. Applicability.

Any person affected by any control requirement of this chapter may apply to the executive director for a six-year extension of the compliance date for the control requirements imposed by any section of this chapter adopted after July 9, 1993, provided that the owner or operator of the affected sources has an approved early reduction application for those sources for which the owner or operator is seeking an extension as specified in 40 Code of Federal Regulations §63.79, and for which:

(1) volatile organic compound (VOC) emissions reductions were made after January 1, 1991, and are greater than or equal to the reductions which would be achieved by implementing the applicable method of control specified in this chapter;

(2) the alternate VOC emissions reductions are verifiable through testing or calculation methods which conform to good engineering practice and which are approvable by the executive director, and represent reductions in the actual emissions from the base year 1990, provided there is no evidence that emissions in the base year 1990 are artificially inflated or substantially greater than emissions in other years prior to implementation of emissions reduction measures;

(3) the alternate VOC reductions created by the Early Reductions Program must be surplus to reductions required by this chapter and any netting or offsetting requirements of §116.150 of this title (relating to New Major Source or Major Modification in Ozone Nonattainment Areas) and §116.161 of this title (relating to Source Located in an Attainment Area with a Greater Than De Minimis Impact); and

(4) the sources in the early reduction application may be restricted to the grouping of the same type of emissions sources based upon determination by the executive director.

§115.923. Documentation.

(a) For each source requesting a six-year extension of the compliance date for control requirements in accordance with §115.920 of this title (relating to Applicability), there shall be established an Early Reductions Plan reflecting the emission reduction for VOC which qualifies the source for the six-year extension. In lieu of preparing a site-specific State Implementation Plan (SIP) for such Early Reductions Plan, a facility owner or operator shall comply with the requirements of this division (relating to Early Reductions).

(b) Documentation required for approval of the extension shall demonstrate to the satisfaction of the executive director that emissions data for the identified source reflects verifiable data based on information for such source. Documentation shall include but is not limited to:

- (1) a listing and description of controlled equipment;
- (2) a listing of postponed required controls;
- (3) a listing of uncontrolled emissions identified in the 1990 Emission Inventory;
- (4) specific facility identification number(s) (FIN);
- (5) specific emission point number(s) (EPN);

(6) account number(s);

(7) identification of applicable permit number(s);

(8) calculation(s), test data, and test methods for all VOC emissions associated with each identified source pertaining to paragraphs (1) and (2) of this subsection including an explanation;

(9) calculation(s), test data, and test methods for VOC reductions as compared to the 1990 Emission Inventory;

(10) an emission limitation; and

(11) any other relevant information necessary to evaluate the merits and/or enforceability of the Early Reduction Plan, as may be requested by the executive director.

SUBCHAPTER J: ADMINISTRATIVE PROVISIONS

DIVISION 3: COMPLIANCE AND CONTROL PLAN REQUIREMENTS

§§115.930, 115.932, 115.934, 115.940

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under TWC; Texas Health and Safety Code, TCAA, §382.017, which provides the commission authority to adopt rules consistent with the policy and purposes of TCAA; §382.002, 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, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to develop plans to protect the state's air; and §382.016, which authorizes the commission to require that records of the air contaminant emissions from a source or activity be made and maintained.

§115.930. Compliance Dates.

For all counties affected by this chapter, the final compliance dates for revisions to control requirements are given within the section relating to counties and compliance schedules in each division if the final compliance date of any provision is after the date of adoption of the current revision to this chapter. If the compliance dates are not specified for any provision, the compliance date is past and all

affected persons must be and remain in compliance with the provision as of the original compliance date.

§115.932. Control Plan Procedure.

Within 30 days of a request by the executive director, the owner or operator of any facility affected by the requirements of any division in this chapter shall submit a control plan for compliance which includes the compliance status of all emission controls required by this chapter, and a detailed description of the method to be followed to achieve compliance, specifying the exact dates by which the following steps will be taken to achieve compliance:

(1) dates by which contracts for emission control systems process modifications will be awarded, or dates by which orders will be issued for the purchase of component parts to accomplish emission control or process modification;

(2) date of initiation of on-site construction or installation of emission control equipment or process change;

(3) date by which on-site construction or installation of emission control equipment or process modification is to be completed; and

(4) date by which final compliance is to be achieved. Initial compliance testing shall be conducted no later than 180 days after the compliance deadline.

§115.934. Control Plan Deviation.

No persons affected by §115.932 of this title (relating to Control Plan Procedure) shall deviate from the terms of the control plans including the date for final compliance and the dates for accomplishing the required steps in such plans. The executive director may, upon application of any person affected, change the date for accomplishing the required steps in a plan. Any control plan that specifies a final compliance date subsequent to the date specified by any sections of this chapter must be approved by the executive director. Approval of a delayed compliance order by the executive director does not constitute satisfaction of all federal requirements nor eliminate the need for EPA approval.

§115.940. Equivalency Determination.

Upon final adoption of any volatile organic compound program of general applicability by EPA, the executive director may review the provisions of the EPA program and the corresponding state program to determine the essential equivalency of the two programs. If the executive director determines that the EPA program is essentially equivalent to the requirements for this chapter, the executive director will state by notice published in the *Texas Register* that the regulated community will be considered to be in compliance with the new EPA program if they are in compliance with the applicable provisions of this chapter. Conversely, the regulated community will be considered to be in

compliance with the applicable provisions of this chapter if they are in compliance with the new EPA program. Notice of intent to publish such equivalency determination shall be provided to the appropriate EPA regional office 45 days prior to publication. The executive director shall review any objection from EPA prior to final publication. Each affected company must file a notice of intent to inform the state which program they intend to use. The executive director will then inform the EPA regional office of each notice of intent.