TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AGENDA ITEM REQUEST

for Rulemaking Adoption

AGENDA REQUESTED: December 7, 2011

DATE OF REQUEST: November 18, 2011

INDIVIDUAL TO CONTACT REGARDING CHANGES TO THIS REQUEST, IF NEEDED: Michael Parrish, (512) 239-2548

CAPTION: Docket No. 2011-0388-RUL. Consideration of the adoption of repealed Section 115.437; amendments to Sections 115.422, 115.427, 115.429, 115.430, 115.432, 115.433, 115.435, 115.436, and 115.439; and new Sections 115.431, 115.450, 115.451, 115.453 - 115.455, 115.458 - 115.461, 115.463 - 115.465, 115.468 - 115.471, 115.473 - 115.475, 115.478, and 115.479 of 30 Texas Administrative Code Chapter 115, Control of Air Pollution from Volatile Organic Compounds and corresponding revisions to the state implementation plan.

The adopted rules implement Federal Clean Air Act reasonably available control technology requirements for sources of volatile organic compounds (VOC) emissions per the control technique guidelines published by the United States Environmental Protection Agency. The adopted rules affect the following eight emission source categories in the Dallas-Fort Worth 1997 eight-hour ozone nonattainment area: industrial cleaning solvents; flexible package printing; paper, film, and foil coatings; large appliance coatings; metal furniture coatings; miscellaneous metal and plastic parts coatings; miscellaneous industrial adhesives; and automobile and light-duty truck coatings. The adopted rules affect the following seven emission source categories in the Houston-Galveston-Brazoria 1997 eight-hour ozone nonattainment area: industrial cleaning solvents; flexible package printing; paper, film, and foil coatings; large appliance coatings; metal furniture coatings; miscellaneous metal and plastic parts coatings; and miscellaneous industrial adhesives. The proposed rules were published in the June 24, 2011, issue of the *Texas Register* (36 TexReg 3834). (Frances Dowiak, Amy Browning) (Rule Project No. 2010-016-115-EN)

_Susana M. Hildebrand_____
Chief Engineer

Kim Herndon for David Brymer
Division Director

_Michael Parrish_____
Agenda Coordinator

Copy to CCC Secretary? NO YES X

Texas Commission on Environmental Quality
Interoffice Memorandum

To: Commissioners **Date:** November 18, 2011

Thru: Bridget Bohac, Chief Clerk
Mark R. Vickery, P.G., Executive Director

From: Susana M. Hildebrand, P.E., Chief Engineer

Docket No.: 2011-0388-RUL

Subject: Commission Approval for Rulemaking Adoption
Chapter 115, Control of Air Pollution from Volatile Organic Compounds
Chapter 115 Volatile Organic Compounds (VOC) Reasonably Available Control Technology (RACT) Rule Revisions
Rule Project No. 2010-016-115-EN

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

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

CTG documents provide information to assist states and local air pollution control authorities in determining RACT for specific emission sources. CTG documents do not impose any legally binding regulations or change any applicable regulations. EPA guidance on RACT indicates that states can choose to implement the CTG recommendations, implement an alternative approach, or demonstrate that additional control for the CTG emission source category is not technologically or economically feasible in the area. FCAA, §183(e) directs the EPA to regulate VOC emissions from certain consumer and commercial product categories by issuing national regulations or by issuing CTG documents in lieu of regulations. The EPA published CTG documents in lieu of national regulations for VOC emissions in 2006 for Industrial Cleaning Solvents (EPA 453/R-06-001) and Flexible Package Printing (EPA 453/R-06-003); in 2007 for Paper, Film, and Foil Coatings (EPA 453/R-07-003), Large Appliance Coatings (EPA 453/R-07-004), and Metal Furniture

Coatings (EPA 453/R-07-005); and in 2008 for Miscellaneous Metal and Plastic Parts Coatings (EPA-453/R-08-003), Miscellaneous Industrial Adhesives (EPA-453/R-08-005), and Automobile and Light-Duty Truck Assembly Coatings (EPA-453/R-08-006).

Under the 1997 eight-hour ozone NAAQS, the Dallas-Fort Worth eight-hour ozone nonattainment area (DFW area) is currently classified as a serious nonattainment area and the Houston-Galveston-Brazoria eight-hour ozone nonattainment area (HGB area) is currently classified as a severe nonattainment area. The purpose of this rulemaking is to implement RACT in the DFW and HGB areas as required by FCAA, §172(c)(1) and §182(b)(2), considering the CTG recommendations for Industrial Cleaning Solvents; Flexible Package Printing; Paper, Film, and Foil Coatings; Large Appliance Coatings; Metal Furniture Coatings; Miscellaneous Metal and Plastic Parts Coatings; and Miscellaneous Industrial Adhesives; and in the DFW area, Automobile and Light-Duty Truck Assembly Coatings.

Scope of the rulemaking:
This rulemaking implements RACT requirements for flexible package printing; industrial cleaning solvents; large appliance coatings; metal furniture coatings; paper, film and foil coatings; miscellaneous industrial adhesives; and miscellaneous metal and plastic parts coatings in the DFW and HGB areas, and for automobile and light-duty truck manufacturing coatings in the DFW area. Affected owners and operators are required to comply with the new and revised rule requirements beginning March 1, 2013.

This rulemaking revises Chapter 115, Subchapter E, Division 2, *Solvent-Using Processes*, to exempt from this division, as of March 1, 2013, the surface coating processes in the DFW and HGB areas that are affected by the rules in adopted new Chapter 115, Subchapter E, Division 5. The exemption minimizes dual applicability as the affected facilities transition to the newer requirements in Division 5. The surface coating categories currently subject to Division 2 that are adopted for regulation in Division 5 include: large appliance coatings; metal furniture coatings; paper coating lines that have the potential to emit VOC emissions of at least 25 tons per year (tpy) from all coatings; miscellaneous metal part and product coatings; and automobile and light-duty truck manufacturing coatings in the DFW area.

This rulemaking revises Chapter 115, Subchapter E, Division 3, *Flexographic and Rotogravure Printing*, to implement the EPA's CTG recommendations for flexible package printing processes that represent RACT in the DFW and HGB areas. The rulemaking expands the existing Chapter 115 rule applicability to include flexible package printing processes with VOC emissions of at least 3 tpy, when uncontrolled, and require these particular processes to comply with the cleaning work practice procedures.

This rulemaking creates new Chapter 115, Subchapter E, Division 5, *Control Requirements for Surface Coating Processes*, to implement the EPA's CTG recommendations for paper, film, and foil coatings; large appliance coatings; metal furniture coatings; and miscellaneous metal and plastic parts coatings that represent RACT for the DFW and HGB

areas, and implement the EPA's CTG recommendations that represent RACT for automobile and light-duty truck assembly coatings in the DFW area. Beginning March 1, 2013, the surface coating operations that are required to comply with the adopted new Division 5 rules will no longer be subject to the rules in Division 2.

This rulemaking creates new Chapter 115, Subchapter E, Division 6, *Industrial Cleaning Solvents*, to implement the EPA's 2006 Industrial Cleaning Solvents CTG recommendations that represent RACT in the DFW and HGB areas. The rules require all affected industrial cleaning operations with VOC emissions of at least 3 tpy, when uncontrolled, to comply with the control requirements.

This rulemaking also creates new Chapter 115, Subchapter E, Division 7, *Miscellaneous Industrial Adhesives*, to implement the EPA's 2008 Miscellaneous Industrial Adhesives CTG recommendations that represent RACT in the DFW and HGB areas. The rules require all affected miscellaneous industrial adhesive application processes with VOC emissions of at least 3 tpy, when uncontrolled, to comply with the control requirements.

A.) Summary of what the rulemaking will do:

The rulemaking revises Chapter 115, Subchapter E, to implement RACT requirements in the DFW and HGB areas for the following CTG emission source categories. Affected sources are required to comply with the new and revised rules beginning March 1, 2013.

Flexible Package Printing Materials

This rulemaking revises Chapter 115, Subchapter E, Division 3 to reduce the VOC content limits of coatings for a flexible package printing line that has the potential to emit at least 25 tpy of VOC from the press dryer when uncontrolled. To further reduce VOC emissions generated from flexible package printing processes, the adopted rules require implementing work practice procedures for materials used during printing-related cleaning activities for all flexible package printing processes with actual VOC emissions of at least 3 tpy, when uncontrolled, from coatings and solvents. The rules provide several compliance options for affected flexible package printing processes including: applying low-VOC coatings to meet the specified VOC content limits; applying coatings in combination with the operation of a vapor control system to meet the specified VOC emission limits; or using a vapor control system that meet an 80% overall control efficiency. The rules also require testing, monitoring, and recordkeeping to demonstrate continuous compliance with the content limits or control efficiency standard.

Industrial Cleaning Solvents

This rulemaking creates new Chapter 115, Subchapter E, Division 6 to establish VOC content limits for cleaning solutions used during industrial cleaning activities on a property with combined actual VOC emissions of at least 3 tpy, when uncontrolled, from all solvents. The adopted rules require implementing certain work practice procedures for the use, storage, and disposal of cleaning solvents. The rules provide several compliance options for affected industrial cleaning solvent operations including: limiting the VOC

content of cleaning solutions; limiting the composite partial vapor pressure of cleaning solutions; and operating a vapor control system that meets an 85% overall control efficiency. The rules also require testing, monitoring, and recordkeeping to demonstrate continuous compliance with the content limits or control efficiency standard.

Large Appliance and Metal Furniture Coatings

This rulemaking creates new Chapter 115, Subchapter E, Division 5 to establish more stringent VOC content limits for coatings used by large appliance and metal furniture coating processes currently subject to the Chapter 115, Subchapter E, Division 2 rules. The new rules in Division 5 limit the VOC content of large appliance and metal furniture coatings in the DFW and HGB areas if total uncontrolled VOC emissions from all applicable coating processes on a property are at least 3.0 pounds per hour and 15 pounds per day. To further reduce VOC emissions from large appliance and metal furniture coating, the rules require implementing work practice procedures to reduce emissions from coating-related waste and cleaning materials. The rules provide several compliance options for affected large appliance and metal furniture coating processes including: applying low-VOC coatings to meet the specified VOC content limits; applying coatings in combination with the operation of a vapor control system to meet the specified VOC emission limits; or using a vapor control system that meet a 90% overall control efficiency. Unless an affected owner or operator chooses to use a vapor control system, all large appliance and metal furniture coatings are required to be applied using approved coating application systems. The rules also require testing, monitoring, and recordkeeping to demonstrate continuous compliance with the content limits or overall control efficiency standard.

Paper, Film, and Foil Coatings

This rulemaking creates new Chapter 115, Subchapter E, Division 5 to establish more stringent VOC content limits for coatings used by a paper, film, and foil coating line that has the potential to emit at least 25 tpy of VOC, when uncontrolled, from coatings and adhesives. The new rules in Division 5 limit the VOC content of paper, film, and foil coatings in the DFW and HGB areas if combined actual VOC emissions from all applicable coating processes on a property are at least three pounds per hour and 15 pounds per day, when uncontrolled. To further reduce VOC emissions from coatings, the rules require implementing work practice procedures to reduce emissions from materials used during cleaning activities. The rules provide several compliance options for affected paper, film, and foil coating processes including: applying low-VOC coatings to meet the specified VOC content limits; applying coatings in combination with the operation of a vapor control system to meet the specified VOC emission limits; or using a vapor control system that meet a 90% overall control efficiency. The rules also require testing, monitoring, and recordkeeping to demonstrate continuous compliance with the content limits or overall control efficiency standard.

Miscellaneous Industrial Adhesives

This rulemaking creates new Chapter 115, Subchapter E, Division 7 to establish VOC content limits for general adhesive application processes, specialty adhesive application processes, and adhesive primer application processes conducted at manufacturing operations with combined actual VOC emissions of at least 3 tpy, when uncontrolled, from adhesives and solvents. To further reduce VOC emissions from adhesive application processes, the rules require implementing work practice procedures to reduce emissions from adhesive-related activities and materials used during associated cleaning operations. The rules provide several compliance options for affected adhesive application processes including: applying low-VOC adhesives to meet the specified VOC content limits; applying adhesives in combination with the operation of a vapor control system to meet the specified VOC emission limits; or using a vapor control system that meet an 85% overall control efficiency. Unless an affected owner or operator chooses to use a vapor control system, all adhesives and adhesive primers are required to be applied using approved application systems. The rules also require testing, monitoring, and recordkeeping to demonstrate continuous compliance with the content limits or control efficiency standard.

Miscellaneous Metal and Plastic Parts Coatings

This rulemaking creates new Chapter 115, Subchapter E, Division 5 to establish more stringent VOC content limits for miscellaneous metal parts and products coating processes currently subject to the Chapter 115, Subchapter E, Division 2 rules. In addition, this rulemaking establishes VOC content limits in Division 5 for the following new metal and plastic parts coating subcategories that are not currently subject to Division 2: miscellaneous plastic parts and products; pleasure craft; automotive/transportation and business machine plastic parts; and motor vehicle materials. The new rules in Division 5 limit the VOC content of the affected metal and plastic parts coatings in the DFW and HGB areas if total uncontrolled VOC emissions from all applicable surface coating processes on a property are at least three pounds per hour and 15 pounds per day. To further reduce VOC emissions from metal and plastic parts coatings, the rules require implementing work practice procedures to reduce emissions from coating-related waste and cleaning materials. The rules provide several compliance options for the affected metal and plastic parts coating processes including: applying low-VOC coatings to meet the specified VOC content limits; applying coatings in combination with the operation of a vapor control system to meet the specified VOC emission limits; or using a vapor control system that meet a 90% overall control efficiency. Unless an affected owner or operator chooses to use a vapor control system, all metal and plastic coatings are required to be applied using approved coating application systems. The rules also require testing, monitoring, and recordkeeping to demonstrate continuous compliance with the content limits or overall control efficiency standard.

Automobile and Light-Duty Truck Assembly Coatings

This rulemaking creates new Chapter 115, Subchapter E, Division 5 to reduce the VOC content limits of coatings used in the DFW area during automobile and light-duty truck manufacturing coating processes currently subject to the Chapter 115, Subchapter E,

Division 2 rules. The rules apply to original equipment manufacturers and operators that coat under contract with the original equipment manufacturer with combined actual VOC emissions of at least 3 tpy, when uncontrolled, from coatings and solvents. The rules also apply to the coating of various non-assembly line parts and products by the original equipment manufacturers and operators that coat under contract with the original equipment manufacturer. To further reduce VOC emissions from automobile and light-duty truck manufacturing coating processes, the rules require work practice procedures to reduce emissions from coating-related waste and cleaning materials. The rules provide automobile and light-duty truck manufacturing coating processes the option of reducing the VOC content of coatings or operating a vapor control system that meets an overall control efficiency of 90%. The rules require testing, monitoring, and recordkeeping to demonstrate continuous compliance with the VOC limits or control efficiency standard.

B.) Scope required by federal regulations or state statutes:
The rules implement RACT for sources of VOC emissions per the CTGs published by the EPA for eight emission source categories in the DFW and HGB areas as required by FCAA, §172(c)(1) and §182(b)(2).

C.) Additional staff recommendations that are not required by federal rule or state statute:

Flexible Package Printing Materials

The EPA's CTG document recommends exempting individual flexible package printing lines from the VOC content limits that have the potential to emit less than 25 tpy of VOC, when uncontrolled, from coatings. However, to determine exemption from the VOC content limits in the existing Chapter 115, Subchapter E, Division 3 rules, the VOC emissions from all flexographic and rotogravure printing processes located on a property must be combined. Incorporating the EPA's CTG recommendation could result in backsliding because flexible package printing lines may already be required to comply with the existing VOC content limits. Therefore, the adopted rules exempt flexible package printing lines from the new VOC content limits, but require them to comply with the existing content limits, unless the printing line qualifies for a different exemption.

Large Appliance Coatings; Metal Furniture Coatings; Paper, Film, and Foil Coatings; Miscellaneous Metal and Plastic Parts Coatings; and Automobile and Light-Duty Truck Assembly Coatings

The EPA's CTG documents recommend exempting each surface coating category with VOC emissions of at least 15 pounds per day, when uncontrolled, from the coating VOC content limits and work practice requirements. However, the current Chapter 115, Subchapter E, Division 2 rules exempt each surface coating category from the VOC content limits if the combined VOC emissions from all applicable surface coating processes on a property subject to Division 2 are less than three pounds per hour and 15 pounds per day. The existing approach may be more stringent than the EPA's CTG recommendations for properties conducting multiple surface coating processes. Therefore, the adopted new

Division 5 rules retain the existing approach to determine exemption from the new rule requirements.

Automobile and Light-Duty Truck Assembly Coatings

The EPA's CTG document does not provide alternative recommendations for reducing VOC emissions from coatings by operating vapor control equipment. However, the existing Chapter 115, Subchapter E, Division 2 rules provide affected automobile and light-duty truck assembly coating processes the option of using vapor control equipment to demonstrate compliance with the rule requirements. To maintain flexibility afforded to affected owners and operators subject to the existing Chapter 115 regulations, the adopted new Division 5 rules allow the use of vapor control equipment as an alternative compliance option.

Monitoring, Testing, and Recordkeeping Requirements

The EPA's CTG documents do not typically recommend specific monitoring, testing, and recordkeeping requirements. The monitoring, testing, and recordkeeping requirements in the adopted rules in Chapter 115, Subchapter E, Divisions 5 - 7 are similar to the requirements in Chapter 115, Subchapter E, Divisions 2 and 3 for these coating and printing processes.

Statutory authority:

The repealed, new, and amended sections are adopted under Texas Water Code (TWC), §5.102, concerning General Powers, which provides the commission with the general powers to carry out its duties under the Texas Water Code; TWC, §5.103, concerning Rules, which authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC; TWC, §5.105, concerning General Policy, which authorizes the commission by rule to establish and approve all general policy of the commission; and under Texas Health and Safety Code (THSC), §382.017, concerning Rules, which authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The repealed, new, and amended sections are also adopted under THSC, §382.002, concerning Policy and Purpose, which establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; THSC §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; and THSC §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the proper control of the state's air. The repealed, new, and amended sections are also adopted under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe reasonable requirements for the measuring and monitoring of air contaminant emissions; THSC §382.021, concerning Sampling Methods and Procedures, which authorizes the commission to prescribe the sampling methods and procedures; and THSC §382.051, concerning Permitting Authority of Commission; Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382. The repealed, new, and amended

sections are also adopted under FCAA, 42 USC, §§7401, *et seq*., which requires states to submit SIP revisions that specify the manner in which the NAAQS will be achieved and maintained within each air quality control region of the state.

The repealed, new, and amended sections implement THSC, §§ 382.002, 382.011, 382.012, 382.016, 382.017, 382.0121, and 382.051, and FCAA, 42 USC, §§7401 *et seq*.

Effect on the:

A.) Regulated community: The adopted rules require affected sources to install control technologies or use reformulated products to meet the VOC limits, implement new work practices, and comply with additional monitoring and recordkeeping requirements. The introduction of new emission source categories into the Chapter 115 rules may increase the compliance and recordkeeping burdens for affected sources.

B.) Public: The public will benefit from improved air quality. It is possible that any additional compliance costs incurred by affected sources could be passed on to consumers.

C.) Agency programs: The adopted rule revisions may increase the workload for Office of Compliance and Enforcement staff when inspecting affected facilities to verify compliance with new or revised Chapter 115 requirements. In addition, the rulemaking may increase the workload for the Small Business and Environmental Assistance Division since the adopted rules will likely impact many small business owners.

Stakeholder meetings:
A CTG Stakeholder Group meeting was held on December 1, 2010. The meeting was held at the TCEQ central office in Austin and a video teleconference of the meeting was broadcast to the Fort Worth and Houston Regional Offices. The CTG Stakeholder Group meeting was open to the public and had 22 stakeholders in attendance. Stakeholders asked questions about the timeline of the rule project and about the applicability of one of the CTG documents. One informal comment was received from a coatings trade association group. The commenter suggested the proposed rules provide a complete exemption from the industrial cleaning solvents requirements for the coatings manufacturing industry because Chapter 106 already regulates all production-related solvent cleaning operations. No changes were made to the proposed rules in response to stakeholder concerns.

Public comment:
The commission held public hearings on July 14, 2011, at 10:00 a.m. and 6:30 p.m. at the Arlington City Council Chambers in Arlington; on July 18, 2011, at 6:30 p.m. at the Houston-Galveston Area Council offices in Houston; and on July 22, 2011, at 10:00 a.m. and 2:00 p.m. at the Texas Commission on Environmental Quality headquarters in Austin. The July 22, 2011, hearing scheduled for 10:00 a.m. was not officially opened because no party indicated a desire to provide comment. Oral comments regarding the Chapter 115

rulemaking was presented by the American Coatings Association (ACA) at the 6:30 p.m. hearing in Houston.

The commission received written comments from ACA, Flexographic Technical Association (FTA), GREEN Environmental Consulting, Inc., Hensley Industries (Hensley), National Aeronautics and Space Administration (NASA), Texas Chemical Council (TCC), EPA, and United States Navy (US Navy), and one individual. Significant public comments are summarized as follows.

General Comments

EPA commented that approval of the portions of the control requirements in §115.453 for the surface coating of large appliances, metal furniture, and miscellaneous metal and plastic parts and products of the proposed rules that replace emissions limits previously adopted as RACT with less stringent emissions limits would not be possible without a demonstration from the State showing that the SIP-approved limits are no longer RACT. The EPA requested the commission explain how the existing Chapter 115 limits are no longer RACT for these sources that in some cases have been complying with these limits for 20 years or more. *In response to this comment, the VOC limits in §115.453(a)(1)(A) - (C) have been revised to implement limits that are equivalent to or more stringent than the EPA's CTG-recommended limits, with the exception of the VOC limits for high performance architectural coatings. The EPA has demonstrated the technological and economic feasibility issues with VOC limits less than the 2008 CTG-recommended limits, which staff agrees with and relied on to support retaining the proposed high performance architectural coating VOC limit.*

EPA expressed concern with the compliance schedules in §§115.439(d), 115.459(b), 115.469(b), and 115.479(b) due to the allowance of an additional 60 days for a source to comply with the rules after becoming subject. EPA suggested requiring compliance with the rules, where possible, by March 1, 2013. Additionally, EPA suggested changing the title of Division 5 to readily distinguish these rules from the rules in Division 2. *No changes have been made in response to these comments.*

ACA commented that the EPA's CTG should be consistent with other EPA rulemakings for pleasure craft, such as the National Emission Standard for Hazardous Air Pollutants for Shipbuilding and Ship Repair Operations. *No changes have been made in response to this comment.*

An individual commented that the one thing no successful businessman can handle is the constant changing of regulations that potentially require equipment and increased employment to support such equipment when one never knows if he or she will be allowed to operate the purchased equipment. The individual commented that a reasonable and prudent businessman needs to be able to plan and that has been impossible with the ever-changing regulations that EPA has come forth with. *No changes have been made in response to this comment.*

GREEN Environmental Consulting Inc., suggested defining a designated on-site maintenance shop as an area designated at a site where coatings are applied on a routine basis to miscellaneous metal parts or products that are used elsewhere on-site as part of that site's permanent operation. *No changes have been made in response to this comment.*

NASA and the US Navy suggested that the commission remove designated on-site maintenance shops from the rule applicability in both Division 2 and Division 5 for the following reasons: this type of facility is not defined in the proposed rules; it is unclear what frequency would be considered routine; the Federal maximum achievable control technology standards for Miscellaneous Metal Parts and Products excludes facility maintenance operations; the industrial maintenance coatings are already covered by the national Architectural and Industrial Maintenance rule; and the EPA's Miscellaneous Metal and Plastic Parts Coatings CTG does not include designated on-site maintenance shops in the applicability. *In response to the comments, Division 5 §115.450(a) has been revised to exclude designated on-site maintenance shops from the miscellaneous metal parts and products coatings rule applicability. Additionally, Division 2 §115.427(a)(8) has been added to exempt the coating of miscellaneous metal parts and products at a designated on-site maintenance shop that was exempt from VOC limits in §115.421(a)(9) prior to January 1, 2012, or that begins operation on or after January 1, 2012; the coating of miscellaneous metal parts and products at a designated on-site maintenance shop that was subject to the VOC limits in §115.421(a)(9) prior to January 1, 2012, remains subject to this division.*

<u>Division 5, Control Requirements for Surface Coating Processes</u>

GREEN Environmental Consulting Inc., suggested revising the definition of extreme performance coating to include marine shipping containers and downhole drilling equipment as examples of products that may need the application of this coating type, as well as including *extreme environmental conditions, such as continuous outdoor exposure*, in the list of conditions that a miscellaneous metal parts and products may be subject to and would need the application of an extreme performance coating. *In response to this comment, the extreme performance coating definition in §115.450(c)(3) - (5) has been revised as suggested for large appliance, metal furniture, and miscellaneous metal and plastic parts coatings.*

GREEN Environmental Consulting Inc., suggested defining a designated on-site maintenance shop as an area designated at a site where coatings are applied to one or more miscellaneous metal parts or products on a routine basis. GREEN Environmental Consulting Inc., suggested adding that the miscellaneous metal parts or products being coated in a designated on-site maintenance shop would be those that are used elsewhere on-site as part of that site's permanent operation. *No changes have been made in response to this comment.*

TCC commented that miscellaneous plastic parts and products are listed under the applicability section in §115.450(a)(4), but that there is no subsequent mention of these parts and products. TCC suggested that the commission clarify whether miscellaneous plastic parts and products are included in the Division 5 rules. *In response to this comment, a definition of miscellaneous plastic parts and products has been added in §115.450(c)(5) to help clarify the rule applicability.*

TCC requested clarification on whether it is the commission's intent to regulate the coating of newly fabricated piping or other equipment at an on-site maintenance shop, which appears to be excluded, while the re-coating of some equipment at an on-site job shop appears to be included. In addition, TCC requested clarification on whether the coating of newly fabricated piping or other equipment at an on-site lay-down yard would be a regulated activity. TCC stated that the EPA excludes the coating of new and existing support structures, piping, and equipment as part of routine maintenance activities, considered to be facility maintenance operations, from 40 Code of Federal Regulations (CFR), Part 63, Subpart MMMM for Surface Coating of Miscellaneous Metal Parts and Products. *Clarification was provided in the rule preamble but no changes have been made to the rule in response to this comment.*

TCC requested clarification on whether extreme performance coatings applied to newly fabricated piping and equipment, which do not meet the corresponding definition in the Division 5 rules, would now be considered a general-use coating. *No changes have been made in response to this comment.*

TCC commented that an activity subject to the miscellaneous metal and plastic parts coatings rules, may use a coating that could be classified as an extreme performance coating, heat resistant coating, or as a miscellaneous metal parts and products coating, depending on the application. TCC requested that the commission clarify the intended use of control requirements in §115.453(a)(1)(C) Table 1 and Table 2. *In response to this comment, a new provision has been added stating that if a coating meets more than one coating type definition, then the coating with the least stringent VOC limit applies.*

ACA requested a small container exemption for pleasure craft touch-up and repair coatings to allow minor repairs at the end of the painting line and avoid having to completely recoat the pleasure craft. *In response to this comment, an exemption has been added in §115.451(14) for pleasure craft touch-up and repair coatings supplied in containers of 1.0 quart or less, not to exceed 50 gallons annually.*

TCC requested confirmation on whether the exemptions and definition of architectural coating in Division 5 includes painting pipes in the process unit, because these pipes are in the field and are stationary structures. TCC requested confirmation on whether the Division 5 rules apply to the coating of pipes in the process unit in addition to the coating of miscellaneous metal parts and products in lay-down yards. *No changes have been made in response to this comment.*

TCC requested clarification on whether safety-indicating coatings exempt under §115.451(6)(C) include those temperature-sensitive coatings used to identify hazards in an industrial setting. *In response to this comment, a definition for safety-indicating coatings has been added to §115.450(c)(5)(AA).*

NASA and the US Navy requested an exemption be added to §115.451 for miscellaneous metal or plastic parts and product surface coating operations performed at on-site installations owned or operated by the Armed Forces of the United States or NASA, or the surface coating of military munitions manufactured by or for the Armed Forces of the United States. NASA and the US Navy requested the exemption because extensive field testing is required before reformulated coatings and solvents can be approved for use and because the proposed regulations would be impractical and extremely costly for NASA and the US Navy due to the complexity of coating operations, the number of coatings and solvents used, and the number of different items and substrates coated. NASA and the US Navy also requested exemption from the miscellaneous metal parts and products coatings rules because historically accurate coatings for these items must be used. *In response to the comments, an exemption from the miscellaneous metal parts and plastic parts coatings rules has been added for the other specific surface coating categories specified in Chapter 115, Subchapter E, Divisions 2 and 5.*

GREEN Environmental Consulting Inc., suggested revising §115.453(a)(1) to remove the term low-VOC coatings from the compliance option that requires low-VOC coatings in combination with a vapor control system to meet the VOC emissions limits. GREEN Environmental Consulting Inc., added that the removal of this term makes it clear that the option of using a VOC coating that exceeds the VOC emissions limits, when used in conjunction with controls, is available. *In response to this comment, the term "low-VOC" has been removed from the option in §115.453(a)(1) to apply coatings in combination with the operation of a vapor control system to meet the specified VOC emission limits. Additionally, the same change has been made consistently throughout Divisions 3, 5, and 7.*

ACA commented that the pleasure craft industry was not afforded the usual opportunity to consult with the EPA on the development of their CTG RACT recommendations because the draft Miscellaneous Metal and Plastic Part Coatings CTG did not mention pleasure craft surface coating operations. The ACA requested revisions to the proposed pleasure craft coating limits because the EPA's final Miscellaneous Metal and Plastic Part Coatings CTG recommendations are not technologically feasible at this time and therefore do not represent RACT for the pleasure craft industry. *In response to this comment, the VOC limits for extreme high-gloss coatings; finish primer/surfacer coatings; and other substrate antifoulant coatings have been increased. Also in response to this comment, the extreme high-gloss coatings and pretreatment wash primer coatings definitions have been modified. Lastly in response to this comment, VOC limits and a definition have been introduced for antifoulant sealer/tie coating, a new coating category.*

GREEN Environmental Consulting Inc., suggested including hand-held paint rollers in §115.453(c)(6) to ensure that this method is acceptable under this provision. GREEN Environmental Consulting Inc., commented that often the term "roller coat" listed in §115.453(c)(4) refers to rollers used in an industrial rolling machine that mechanically applies coating. *In response to this comment, hand-held paint rollers have been incorporated as a compliant coating application system in §115.453(c)(6).*

The EPA commented that the alternate control requirements proposed in §115.454(b) should be revised to make clear that any alternative requirements to §115.453(a)(1)(A), approved by the executive director, would need to be submitted as a site specific SIP revision for approval by EPA to ensure it meets the requirements for enforceability and public hearings. *No changes have been made in response to this comment because the commission does not agree that revisions are warranted to clarify that EPA approval of alternate control requirements is necessary.*

Division 6, Industrial Cleaning Solvents

TCC suggested clearly exempting cleaning operations that do not involve the removal of uncured adhesives, inks, and coatings, and contaminants such as dirt, soil, oil, and grease from the industrial cleaning solvents rule. TCC commented that these cleaning operations would likely already be regulated by the vent gas control or batch processes rules in Chapter 115. *No changes have been made in response to this comment.*

TCC, NASA, and the US Navy commented that the term "janitorial cleaning" is defined in §115.460; however, there is no exemption for janitorial cleaning as recommended in the EPA's Industrial Cleaning Solvent CTG. NASA and the US Navy suggested excluding janitorial cleaning from the Industrial Cleaning Solvents rule applicability. TCC suggested including an exemption in §115.461 for janitorial cleaning. *In response to the comments, janitorial cleaning has been excluded from the rule applicability in §115.460(a).*

TCC claimed that the EPA's CTG intended to have broad applicability to industrial cleaning operations that have VOC emissions of at least 15 pounds per day, before controls. TCC added that the EPA suggests that cleaning of miscellaneous metal parts coating be excluded from applicability. TCC requested that the cleaning of miscellaneous metal parts in the petrochemical industry be exempt from the industrial cleaning solvents rule for these reasons. *No changes have been made in response to this comment.*

ACA requested the commission exempt resin manufacturing from the industrial cleaning solvents rule since the proposed VOC limits would not allow effective cleaning of resin manufacturing equipment. *In response to this comment, resin manufacturing has been exempted from the industrial cleaning solvents rules under §115.461(d)(13).*

TCC suggested revising §115.461(b) to exempt a cleaning operation from the requirements in Division 6 if all of the VOC emissions from the cleaning operation originate from a

source for which another division within Chapter 115 has established a control requirement, emission specification, or exemption that applies to that VOC source category in that county. *In response to this comment, an exemption has been incorporated under §115.461(c) for cleaning operations that are controlled by emission specifications or control requirements established in another division in Chapter 115.*

Division 7, Miscellaneous Industrial Adhesives

NASA suggested exempting adhesives and adhesive primers that are subject to the National Volatile Organic Compound Emission Standards for Consumer Products, 40 CFR Part 59, Subpart C because the EPA states in the *Federal Register* notice for the Industrial Adhesive CTG (73 FR 40255) that the miscellaneous industrial adhesives category does not include materials that are subject to this rulemaking. *No changes have been made in response to this comment.*

NASA and the US Navy commented that a number of substances regulated in §115.473 are more likely to be used for institutional purposes or at construction sites rather than in manufacturing facilities and it is unclear how the rule will apply to materials used at sites that are not manufacturing facilities. The US Navy suggested exempting adhesives or adhesive primers used for general consumer or non-manufacturing applications from the requirements in Division 7. *In response to these comments, the rule applicability in §115.470(a) is being revised to clarify the requirements apply to the use of adhesives at manufacturing operations and adhesives applied in the field (e.g., construction jobs in the field) are not subject to this division.*

NASA requested an exemption be added to §115.471 for adhesives or adhesive primers used on-site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the Texas National Guard) and NASA. NASA requested the exemption because extensive field testing is required before adhesives can be approved for use and the proposed regulations would be impractical and extremely costly for NASA due to the complexity of adhesive operations, the number of adhesives used, and the number of different items and substrates bonded together. *No changes have been made in response to this comment.*

TCC requested the *other adhesive primers* application process category be replaced with *other adhesive primers, other than incidental industrial use*. TCC based their exemption request on the expectation that chemical plants may use limited amounts of adhesives for various repairs. TCC stated that although the adhesive use associated with these repairs is expected to be below the 3 tpy exemption threshold in §115.471, recordkeeping would still be required under §115.478(b). *No changes have been made in response to this comment.*

Significant changes from proposal:

Division 2, Surface Coating Processes

- Added §115.427(8) to exempt the coating of miscellaneous metal parts and products at a designated on-site maintenance shop that was exempt from VOC limits in §115.421(a)(9) prior to January 1, 2012, or that begins operation on or after January 1, 2012. The coating of miscellaneous metal parts and products at a designated on-site maintenance shop that was subject to the VOC limits in §115.421(a)(9) prior to January 1, 2012, remains subject to this division. For purposes of this exemption, a designated on-site maintenance shop is an area at a site where used miscellaneous metal parts or products are re-coated on a routine basis.

Division 3, Flexographic and Rotogravure Printing

- Added a definition for cleaning operation in §115.430(b).
- Revised the flexible package printing control requirements in §115.432 to clarify which VOC content limit applies for the compliance option to use coatings in combination with the operation of a vapor control system to meet the specified VOC emission limits.

Division 5, Control Requirements for Surface Coating Processes

- Revised the rule applicability to exclude the coating of miscellaneous metal parts and products at a designated on-site maintenance shop.
- Revised the definitions of extreme performance coatings for large appliance, metal furniture, and miscellaneous metal and plastic parts coatings.
- For pleasure craft coatings definitions in §115.450(c)(8), revised the definitions for extreme high-gloss coatings and pretreatment wash primers and added new definitions for antifoulant sealer/tie coatings, repair coatings, and touch-up coatings.
- For metal and plastic parts coatings definitions in §115.450(c)(5), revised the definition for extreme performance coatings and added new definitions for miscellaneous plastic parts and products and safety-indicating coatings.
- Revised the control requirements in §115.453 to clarify which VOC content limit applies for the compliance option to use coatings in combination with the operation of a vapor control system to meet the specified VOC emission limits.
- Revised the VOC content limits in §115.453(a)(1)(A) - (C) for large appliance, metal furniture, and miscellaneous metal parts and products to include the CTG-recommended limits that are equivalent to or more stringent than the existing Chapter 115 limits, with the exception of the VOC limit for high performance architectural coatings.
- Revised the pleasure craft coatings VOC content limits in §115.453(a)(1)(F) for extreme high-gloss coatings, finish primer-surfacer, and other substrate antifoulant coatings and added a specific VOC content limit for antifoulant sealer/tie coatings.

Division 6, Industrial Cleaning Solvents

- Defined VOC composite partial vapor pressure in §115.460(b).

- Added an exemption in §115.461 for solvent cleaning operations controlled in accordance with emission specifications or control requirements in another division in Chapter 115.
- Added an exemption in §115.461 from the applicability calculation for the VOC emissions from industrial solvent cleaning operations that are exempt from this division.
- Incorporated a definition of VOC composite partial vapor pressure in §115.460(b) and added an approved test method to determine vapor pressure in §115.465.

Division 7, Miscellaneous Industrial Adhesives

- Revised the rule applicability to clarify the requirements apply to the use of adhesives at manufacturing operations and adhesives applied in the field (e.g., construction jobs in the field) are not subject to this division.
- Revised daily weighted average definition in §115.470(b).
- Added definitions in §115.470(b) for pounds of VOC per gallon of adhesives (minus water and exempt solvents) with corresponding equation; pounds of VOC per gallon of solids with corresponding equation; repair facility; and undersea-based weapons systems components.
- Added an exemption in §115.471 for adhesive and adhesive primer application processes controlled in accordance with emission specifications or control requirements in another division in Chapter 115.
- Added an exemption in §115.471 from the applicability calculation for the VOC emissions from adhesive and adhesive primer application processes that are exempt from this division.
- Revised the control requirements in §115.471 to clarify which VOC content limit applies for the compliance option to use adhesives in combination with the operation of a vapor control system to meet the specified VOC emission limits.

Potential controversial concerns and legislative interest:
The adopted rulemaking will likely impact small businesses. The adopted rulemaking will also regulate sources that were previously not required to comply with Chapter 115 VOC limits.

In response to comments, staff determined that some of the pleasure craft coating VOC limits included in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG recommendations are not technologically feasible at this time and therefore do not constitute RACT for Texas. The EPA may not agree with this conclusion.

Does this rulemaking affect any current policies or require development of new policies?
No.

What are the consequences if this rulemaking does not go forward? Are there alternatives to rulemaking?
If the rules are not adopted, the EPA may determine that the state has not met its obligation to implement RACT as required in FCAA, §172(c)(1) and §182(b)(2). EPA could then issue a finding of Failure to Submit concerning this SIP requirement. If a RACT determination was not submitted to EPA within 18 months of such a finding, Texas would be subject to sanctions by the EPA under FCAA, §179.

The commission could decide to not pursue adoption of the rules for these CTG categories. However, as discussed elsewhere in this executive summary, the state is obligated under the FCAA to submit a SIP revision implementing RACT for these CTG categories with federally enforceable measures or demonstrating why the CTG recommendations are not RACT. Due to the scope and number of sources affected by the CTG categories, any non-rule means of implementing RACT that can be made federally enforceable, such as agreed orders, are not a practical alternative to rulemaking in this circumstance. Based on discussions with EPA Region 6 staff and review of the CTG recommendations, demonstrating that the CTG recommendations do not represent RACT is not a viable option.

Key points in the adoption rulemaking schedule:
***Texas Register* proposal publication date:** June 24, 2011
Anticipated *Texas Register* publication date: December 23, 2011
Anticipated effective date: December 29, 2011
Six-month *Texas Register* filing deadline: December 24, 2011
Anticipated adoption agenda date: December 7, 2011

Agency contacts:
Frances Dowiak, Rule Project Manager, 239-3931, Air Quality Division
Amy Browning, Staff Attorney, 239-0891
Michael Parrish, Texas Register Coordinator, 239-2548

Attachments
Due to the size of the CTG documents, the following documents are available upon request:
Industrial Cleaning Solvents CTG;
Flexible Package Printing CTG;
Paper, Film, and Foil Coatings CTG;
Large Appliance Coatings CTG;
Metal Furniture Coatings CTG;
Miscellaneous Metal and Plastic Parts Coatings CTG;
Miscellaneous Industrial Adhesives CTG; and
Automobile and Light-Duty Truck Assembly Coatings CTG.

These CTG documents may also be electronically accessed at:
http://www.tceq.texas.gov/airquality/stationary-rules/ctg/control_techniques_stakeholder.html

Re: Docket No. 2011-0388-RUL

cc: Chief Clerk, 2 copies
Executive Director's Office
Susana M. Hildebrand, P.E.
Anne Idsal
Curtis Seaton
Ashley Morgan
Office of General Counsel
Frances Dowiak
Michael Parrish
Brian Christian
Richard Hyde, P.E.

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

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

Background and Summary of the Factual Basis for the Adopted Rules

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

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

The CTG documents provide information to assist states and local air pollution control authorities in determining RACT for specific emission sources. The CTG documents describe the EPA's evaluation of available information, including emission control options and associated costs, and provide the EPA's RACT recommendations for controlling emissions from these sources. The CTG documents do not impose any legally binding regulations or change any applicable regulations. The EPA's guidance on RACT indicates that states can choose to implement the CTG recommendations, implement an alternative approach, or demonstrate that additional control for the CTG emission source category is not technologically or not economically feasible in the area.

FCAA, §183(e) directs the EPA to regulate VOC emissions from certain consumer and

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

Flexible Package Printing CTG, Group II Issued in 2006

The adopted Chapter 115 rules include restricting the VOC content limits of materials; increasing the overall control efficiency of add-on controls used in flexible package printing operations; and establishing work practice procedures for associated cleaning activities. Additionally, the adopted rules expand rule applicability beginning March 1, 2013, to include flexible package printing lines that were previously exempt from the rules.

The EPA's 2006 Flexible Package Printing CTG recommends exempting flexible package printing operations from all VOC coating content limits if the operations have total actual VOC emissions less than 15 pounds per day from inks, coatings, and adhesives.

For the Houston-Galveston-Brazoria 1997 eight-hour ozone nonattainment area (HGB area) (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties), the existing Chapter 115 rules provide an exemption for combined flexographic and rotogravure printing operations with the potential to emit less than 25 tons per year (tpy) of VOC from inks and for the Dallas-Fort Worth 1997 eight-hour ozone nonattainment area (DFW area) (Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties), the existing Chapter 115 rules provide an exemption for combined flexographic and rotogravure printing operations with the potential to emit less than 50 tpy of VOC emissions from inks. Calculating only the VOC emissions resulting from flexible package printing operations to determine exemption from the required controls may create backsliding issues for properties already complying with the current Chapter 115 rules because sources currently subject to the Chapter 115 rules could potentially become exempt. The existing Chapter 115 exemption limit is equal to or potentially more stringent than the 2006 CTG-recommended exemption threshold for properties conducting multiple flexographic and rotogravure printing operations and is retained in the adopted rules.

Additionally, the EPA's 2006 CTG recommends exempting individual flexible package printing lines from complying with VOC coating content limits if the line has the potential to emit less than 25 tpy of uncontrolled VOC emissions from the dryer, from inks, coatings, and adhesives. As discussed elsewhere in this preamble, the current

Chapter 115 rules require combining the VOC emissions from all flexographic and rotogravure printing lines to determine exemption from the VOC coating content limits. Implementing the 2006 CTG recommendation may exempt flexible package printing lines co-located on a property with other flexographic and rotogravure printing lines that are currently required to comply with the VOC control limits. The adopted Chapter 115 rules retain the existing VOC content limits for a flexible package printing line with VOC emissions below the 2006 CTG-recommended exemption threshold.

The EPA's 2006 CTG recommends requiring control equipment to have an overall control efficiency ranging from 65% to 80% depending on the first installation date of the press and control equipment. The commission disagrees with the 2006 CTG recommendation to correlate control device efficiency requirements with the first installation date of the printing press or control device regardless of where the equipment was first installed. Imposing this policy may encourage the installation of older, less efficient equipment and may create potential backsliding issues. The policy may also create significant practical enforceability issues for commission investigators with regard to verifying the first installation date of the control equipment. Instead, the adopted rules implement the CTG-recommended 80% overall control efficiency, regardless of the first installation date.

The adopted rulemaking implements the recommendations in the EPA's 2006 Flexible

Package Printing CTG that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble.

Industrial Cleaning Solvents CTG, Group II Issued in 2006

The adopted new rules in Chapter 115, Subchapter E, Division 6 establish VOC content limits for cleaning solvents used in general cleaning activities; provide exemptions for certain cleaning operations from all or portions of the rules; and require certain work practice procedures for the use, storage, and disposal of cleaning solvents. The adopted rules affect industrial cleaning solvent operations in the DFW and HGB areas beginning March 1, 2013, located on a property with total actual VOC emissions of at least 3.0 tpy, when uncontrolled, from all cleaning solvents.

In response to comments on the proposed industrial cleaning solvents rules, the commission is adopting new §115.461(c) to exempt any solvent cleaning operation that is controlled by the control requirements or emission specifications in another division in Chapter 115 from the requirements in this division. The adopted new exemption provides flexibility and reduces the compliance burden for affected sources. Additionally, the commission expects that complying with requirements in other Chapter 115 rules is at least as effective as meeting the industrial cleaning solvents rule requirements. The adopted exemption is consistent with the EPA's CTG recommendation to ensure that a particular cleaning activity is not subject to duplicative

requirements.

The adopted rulemaking implements the recommendations in the EPA's 2006 Industrial Cleaning Solvents CTG that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble.

Large Appliance Coatings CTG, Group III Issued in 2007

The adopted Chapter 115 rules reduce the VOC content limits of coatings; increase the overall control efficiency for add-on controls used in large appliance coating operations; and establish minimum transfer efficiency for coating application methods. The adopted rules also require certain work practice procedures for coating-related activities and materials used during associated cleaning operations.

The EPA's 2007 CTG recommends exempting large appliance coating processes from the coating VOC limits and work practice standards if total uncontrolled VOC emissions from coatings and associated cleaning solvents are less than 15 pounds per day. The current Chapter 115 rules provide an exemption from the coating VOC content limits for large appliance coating operations if total uncontrolled VOC emissions from all applicable coating processes on a property subject to Chapter 115, Subchapter E, Division 2, Surface Coating Processes, are less than 3.0 pounds per hour and 15 pounds per day. The existing exemption from the required VOC controls may be more stringent

for properties conducting multiple coating processes specified in Division 2 because the exemption is not based on VOC emissions from a single coating category. To prevent potential backsliding for properties already required to comply with the state's regulations, the adopted Chapter 115 rules retain the existing exemption criteria.

Despite the full demonstration of noninterference provided in the proposed rule preamble, the EPA commented that in order for the proposed rules to be approved as RACT, the state must also demonstrate that the existing Chapter 115 VOC emission limits for large appliance coatings, which were based on the EPA's original 1977 CTG recommendations, are no longer technologically or economically feasible. The commission contends that by promulgating higher 2007 CTG-recommended RACT limits for large appliance coatings, the EPA has established that the original 1977 CTG-recommended limits, and thus the existing Chapter 115 limits, are not technologically or economically feasible. However, the EPA's 2007 CTG did not specifically explain why the lower limits, included in the original 1977 CTG recommendations, were no longer technologically or economically feasible. In absence of any specific information indicating that the commission's existing large appliance coating limits are no longer technologically or economically feasible, the adopted Chapter 115 rules in Subchapter E, Division 5 only include the 2007 CTG-recommended limits that are equivalent to or lower than the existing limit. For the coating categories in the 2007 CTG where the EPA recommended a less stringent limit than the general limit in the 1977 CTG, the adopted

rules retain the original emission limit from the 1977 CTG.

The EPA's 2007 CTG document recommends exempting the following types of large appliance coatings and coating operations from the coating VOC limit requirements: stencil coatings; safety-indicating coatings; solid-film lubricants; electric-insulating and thermal-conducting coatings; and touch-up and repair coatings. The commission is not adopting this exemption from the coating VOC limits for these coatings and coating operations because they are not provided specific exemption from the coating VOC emission limits in the commission's existing rules.

The adopted rules implement the recommendations in the EPA's 2007 Large Appliance Coatings CTG that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble.

Metal Furniture Coatings CTG, Group III Issued in 2007

The adopted Chapter 115 rules reduce VOC content limits of coatings; increase the overall control efficiency for add-on controls used in metal furniture coating processes; and establish minimum transfer efficiency of coating application methods. The adopted rules also require certain work practice procedures for coating-related activities and materials used during associated cleaning operations.

The EPA's 2007 CTG recommends exempting metal furniture coating operations from the coating VOC limits and work practice standards if total uncontrolled VOC emissions from coatings and associated cleaning solvents are less than 15 pounds per day. The current Chapter 115 rules provide an exemption from the coating VOC emission limits for metal furniture coating operations if total uncontrolled VOC emissions from coatings in all applicable coating processes located on a property subject to Chapter 115, Subchapter E, Division 2, are less than 3.0 pounds per hour and 15 pounds per day. In the commission's existing rules, exemption from the required VOC controls may be more stringent for properties conducting multiple coating processes specified in Division 2 because the exemption is not based on VOC emissions from a single coating category. To prevent potential backsliding for properties already required to comply with the state's regulations, the adopted Chapter 115 rules retain the exemption criteria in the commission's existing rules.

Despite the full demonstration of noninterference provided in the proposed rule preamble, the EPA commented that in order for the proposed rules to be approved as RACT, the state must also demonstrate that the existing Chapter 115 VOC content limits for metal furniture coatings, which were based on EPA's original 1977 CTG recommendations, were no longer technologically or economically feasible. The commission contends that by promulgating higher 2007 CTG-recommended RACT limits for metal furniture coatings, the EPA has established that the original 1977 CTG-

recommended limits, and thus the existing Chapter 115 limits, are not technologically or economically feasible. However, the EPA's 2007 CTG did not specifically explain why the lower limits included in the original 1977 CTG recommendations were no longer technologically or economically feasible. In absence of any specific information indicating that the commission's existing metal furniture coating limits are no longer technologically or economically feasible, the adopted Chapter 115 rules in Subchapter E, Division 5 only include the 2007 CTG-recommended limits that are equivalent to or lower than the existing limit. For the coating categories in the 2007 CTG that the EPA recommended a less stringent limit than the general limit in the 1977 CTG, the adopted rules retain the original emission limit from the 1977 CTG.

The EPA's 2007 CTG document recommends exempting the following types of metal furniture coatings and coating operations from the coating VOC limit requirements: stencil coatings; safety-indicating coatings; solid-film lubricants; electric-insulating and thermal-conducting coatings; and touch-up and repair coatings. No comments were received in response to the commission's request; therefore, the commission is not adopting this exemption from the coating VOC limits for these coatings and coating operations because they are not provided specific exemption from the coating VOC emission limits in the commission's existing rules.

The adopted rules implement the EPA's 2007 Metal Furniture Coatings CTG

recommendations that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble.

Paper, Film, and Foil Coatings CTG, Group III Issued in 2007

The adopted Chapter 115 rules incorporate new requirements into Chapter 115, Subchapter E, Division 5, affecting individual paper, film, and foil coating lines with the potential to emit from coatings, equal to or greater than 25 tpy of VOC, when uncontrolled. The adopted rules reduce the VOC content limits of coatings; increase the overall control efficiency for add-on controls used in paper, film, and foil coating processes; and establish work practice procedures for materials used during cleaning operations associated with paper, film, and foil coating.

The adopted rules revise Chapter 115, Subchapter E, Division 2 to incorporate new work practice procedures for materials used during cleaning operations associated with paper, film, and foil coating processes that are specifically exempt from the adopted new Subchapter E, Division 5 rules in the DFW and HGB areas.

The EPA's 2007 CTG recommends exempting all paper, film, and foil coating operations on a property from the coating VOC content limits and work practice standards if total uncontrolled VOC emissions from paper, film, and foil coatings and associated cleaning solvents are less than 15 pounds per day. The current Chapter 115 rules provide an

exemption from the coating VOC emission limits for paper, film, and foil coating operations if total uncontrolled VOC emissions from all applicable surface coating processes on a property subject to Chapter 115, Subchapter E, Division 2, are less than 3.0 pounds per hour and 15 pounds per day. Implementing the 2007 CTG recommendation may exempt paper, film, and foil coating lines co-located on a property with other coating lines subject to Division 2 that are currently complying the coating VOC content limit. To prevent potential backsliding for properties conducting paper, film, and foil coating operations already required to comply with the state's regulations, the adopted Chapter 115 rules retain the exemption criteria in the commission's existing rules.

Additionally, the adopted rules do not implement the EPA's 2007 CTG recommendation to exempt a paper, film, and foil coating line from complying with coating VOC limits if the line has the potential to emit less than 25 tpy of uncontrolled VOC emissions from coatings. As previously stated, the current Chapter 115 rules require combining the VOC emissions from all applicable surface coating processes located on a property subject to Subchapter E, Division 2 to determine exemption from the VOC coating content limits. The existing exemption from the required VOC controls may be more stringent for properties conducting multiple coating processes specified in Division 2 because the exemption is not based on VOC emissions from a single coating category. To prevent backsliding, the adopted Chapter 115 rules retain the VOC content limits in the

commission's existing rules for a paper, film, and foil coating line with VOC emissions below the 2007 CTG-recommended exemption threshold.

The adopted rules implement the EPA's 2007 Paper, Film, and Foil Coatings CTG recommendations that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble.

Miscellaneous Industrial Adhesives CTG, Group IV Issued in 2008

The adopted new rules in Chapter 115, Subchapter E, Division 7 establish VOC content limits used during specific adhesive application processes; provide various exemptions from all or portions of the rules for certain adhesives and adhesive application processes; and require certain work practice procedures for the use, storage, and disposal of adhesives, adhesive-related waste, solvent, and cleaning materials. The adopted rules affect adhesive application processes in the DFW and HGB areas beginning March 1, 2013, located on a property with total actual VOC emissions of at least 3.0 tpy when uncontrolled from adhesives and solvents.

The adopted rules implement the EPA's 2008 Miscellaneous Industrial Adhesives CTG recommendations that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble.

Miscellaneous Metal and Plastic Parts Coatings CTG, Group IV Issued in 2008

The adopted Chapter 115 rules in Subchapter E, Division 5 expand the scope of the existing rule applicability to include the new coating categories recommended in the EPA's 2008 CTG and implement the recommendations for those coating categories. The adopted Chapter 115 rules reduce VOC content limits of coatings and increase the overall control efficiency of add-on controls used in miscellaneous metal and plastic part coating operations; establish minimum transfer efficiency of coating application methods; and incorporate a new test method. The adopted rules also require certain work practice procedures for coating-related activities and cleaning operations associated with miscellaneous metal and plastic parts coating.

The EPA's 2008 CTG recommends exempting miscellaneous metal and plastic parts coating operations from the VOC control requirements if total uncontrolled VOC emissions from miscellaneous metal and plastic parts coatings and cleaning solvents are less than 15 pounds per day. The current Chapter 115 rules exempt miscellaneous metal parts and products coating operations from the required coating VOC limits if located on a property where total uncontrolled VOC emissions from all applicable surface coating processes subject to Chapter 115, Subchapter E, Division 2 are less than 3.0 pounds per hour and 15 pounds per day. In the commission's existing rules, exemption from the required controls may be more stringent for properties conducting multiple coating

processes specified in Division 2 because the exemption is not based on VOC emissions from a single coating category. To prevent potential backsliding for sources already subject to the Chapter 115 rules, the adopted rules would integrate the new 2008 CTG coating categories into the exemption in the commission's existing rules from the VOC control requirements. The adopted Chapter 115 rules retain the state's approach to maintain consistency with the current exemption criteria.

Despite the full demonstration of noninterference provided in the proposed rule preamble, the EPA commented that in order for the proposed rules to be approved as RACT, the state must also demonstrate that the existing Chapter 115 VOC content limits for miscellaneous metal part and product coatings, which were based on EPA's original 1978 CTG recommendations, were no longer technologically or economically feasible. The commission contends that by promulgating higher 2008 CTG-recommended RACT limits for miscellaneous metal part and product coatings, the EPA has established that the original 1978 CTG-recommended limits, and thus the existing Chapter 115 limits, are not technologically or economically feasible. However, the EPA's 2008 CTG did not specifically explain why the lower limits included in the original CTG recommendations were no longer technologically or economically feasible. In absence of any specific information indicating that the commission's existing miscellaneous metal part and product coating limits are no longer technologically or economically feasible, the adopted Chapter 115 rules in Subchapter E, Division 5 only include the 2008 CTG-

recommended limits that are equivalent to or lower than the existing limits. For the coating categories in the 2008 CTG where the EPA recommended a less stringent limit than the general limit in the 1978 CTG, the adopted rules retain the original emission limit from the 1978 CTG.

In response to comments, the commission has revised §115.427 to limit the rule applicability to the re-coating of used miscellaneous metal parts and products at a designated on-site maintenance shop that was subject to §115.421(a)(9) prior to January 1, 2012, which is the approximate effective date of this rule revision. Additionally, in response to this same comment, the commission has revised §115.450(a) to exclude designated on-site maintenance shops from the miscellaneous metal parts and products coatings rule applicability in Division 5. The re-coating of used miscellaneous metal parts and products at a designated on-site maintenance shop that was exempt from §115.421(a)(9) prior to January 1, 2012, or that begins operation on or after January 1, 2012, is not subject to the miscellaneous metal parts and products coatings rules in either Division 2 or Division 5. The adopted revisions prevent any potential backsliding concerns by requiring sources that are currently complying with these rules in Division 2 to continue to meet these VOC limits. The adopted revisions are consistent with the intent of EPA's 1978 and 2008 CTG RACT recommendations for miscellaneous metal parts and products coatings and the commission maintains the rules continue to satisfy RACT requirements in FCAA, §172(c)(1) and §182(b)(2) and (f) for this CTG emission

source category.

In response to comments, the commission added new §115.451(b)(4) to exempt all other coating categories regulated in Divisions 2 and 5 from the miscellaneous metal and plastic parts coatings rules. Incorporating this new exemption into §115.451 clarifies that the miscellaneous metal parts and products coatings rules do not apply to the coating operations characterized by another rule specified in Division 2 and Division 5.

Based on information provided during the public comment period, the commission determined that some of the pleasure craft coating VOC limits included in the EPA's CTG recommendations are not technologically feasible at this time and therefore do not represent RACT. In response to comments, the commission is increasing the VOC limit for *extreme high-gloss coatings* to 5.0 pounds of VOC per gallon of coating (lb VOC/gal coating) and revising the definition include any coating that achieves greater than 90% reflectance on a 60 degree meter. In response to comments, the commission is increasing the VOC limit for *finish primer/surfacer coatings* to 5.0 lb VOC/gal coating. In response to comments, the commission is increasing the VOC limit for *other substrate antifoulant coatings* to 3.34 lb VOC/gal coating. In response to comments, the commission is introducing a new specialty coating category for *antifoulant sealer/tie coatings*, which are coatings applied over an antifoulant coating to prevent the release of biocides into the environment, or to promote adhesion between an antifoulant and a

primer or other antifoulants, and is establishing a VOC limit of 3.5 lb VOC/gal coating for this new category. In response to comments, the commission is revising the definition of *pretreatment wash primer coatings* to include any coating that contains no more than 25% solids, by weight, and at least 0.10% acids, by weight; is used to provide surface etching; and is applied directly to fiberglass and metal surface to provide corrosion resistance and adhesion of subsequent coatings.

The EPA's 2008 CTG document recommends exempting the following types of miscellaneous metal part and product coatings and coating operations from the coating VOC limits and the coating application system requirements: stencil coatings; safety-indicating coatings; solid-film lubricants; electric-insulating and thermal-conducting coatings; magnetic data storage disk coatings; and plastic extruded onto metal parts to form a coating. The commission is not adopting this exemption because the listed coatings and coatings operations are not provided specific exemption from the coating VOC emission limits in the commission's existing rules; however, the adopted Chapter 115 rules do provide exemptions from the new coating application system requirements for these coatings and coating processes.

Additionally, the EPA's 2008 CTG document recommends structuring RACT rule requirements to provide properties that coat heavy-duty truck bodies or body parts with the option of meeting either the miscellaneous metal and plastic parts coatings

regulations or automobile and light-duty truck assembly coatings regulations. The EPA's CTG recommendation is inconsistent with the general regulatory approach in Chapter 115 and is not being adopted.

At proposal, the commission requested comment on the appropriate applicability for the coating of other parts on coating lines separate from automobile and light-duty truck assembly surface coating processes, such as bumpers, aftermarket parts, and repair parts. However, no comments were received and therefore these parts and products will remain subject to the miscellaneous metal parts and products surface coating rules and will be subject to the miscellaneous plastic parts and products surface coating rules, depending on the substrate being coated.

The adopted rules implement the recommendations in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble.

Automobile and Light-Duty Truck Assembly Coatings CTG, Group IV Issued in 2008

The adopted Chapter 115 rules in Subchapter E, Division 5 reduce the VOC content limits of coatings applied to automobile and light-duty trucks during manufacturing and establish certain work practice procedures for cleaning operations associated with

automobile and light-duty truck assembly coatings.

The adopted rules implement the recommendations in the EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG that the commission has determined are RACT in the DFW area, except as specifically discussed in this preamble.

Demonstrating Noninterference Under FCAA, Section 110(l)

The commission provides the following information to demonstrate that the inclusion of the Large Appliance Coatings, Metal Furniture Coatings, and Miscellaneous Metal and Plastic Parts Coatings CTG recommendations will not negatively impact the status of the state's attainment with the 1997 eight-hour ozone NAAQS, will not interfere with control measures or any other applicable requirement, and will not prevent reasonable further progress toward attainment of the ozone NAAQS.

By letter dated December 8, 2008, the commission requested clarification from the EPA regarding several issues related to the recommendations in the following three CTG documents: Control Techniques Guidelines for Large Appliance Coatings (EPA 453/R-07-004), issued in 2007; Control Techniques Guidelines for Metal Furniture Coatings (EPA 453/R-07-005), issued in 2007; and Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings (EPA 453/R-08-003), issued in 2008. A number of the recommended VOC content limits for specific coatings categories in the

2007 and 2008 CTG documents are less stringent than the more general VOC content limits specified in the following EPA guideline series recommendations: Control of Volatile Organic Emissions from Existing Stationary Sources - Volume V: Surface Coating of Large Appliances (EPA-450/2-77-0.34), issued in 1977; Control of Volatile Organic Emissions from Existing Stationary Sources - Volume III: Surface Coating of Metal Furniture (EPA-450/2-77-032), issued in 1977; and Control of Volatile Organic Emissions from Existing Stationary Sources - Volume VI: Surface Coating of Miscellaneous Metal Parts and Products (EPA-450/2-78-015), issued in 1978. The commission requested clarification to assure that implementing the CTG recommendations would not be considered as backsliding and to be certain that the commission has the appropriate information to determine whether the new 2007 and 2008 CTG recommendations actually represent RACT for Texas. On March 17, 2011, the EPA issued a guidance memorandum regarding these three CTG categories entitled, *Approving SIP Revisions Addressing VOC RACT Requirements for Certain Coatings Categories*. The EPA stated in the memorandum: ". . . if a state believes the volume usage distribution among the general and specialty categories in the docket is representative of the distribution in the nonattainment area, we believe that if a state undertakes wholesale adoption of the new categorical limits in a specific CTG, the state may rely on the assessments in the docket to demonstrate that the range of new limits will result in an overall reduction in emissions from the collection of covered coatings."

Consistent with this EPA memorandum, on June 8, 2011, the commission proposed to implement the 2007 and 2008 CTG-recommended RACT limits for these three emission source categories. The proposed rulemaking provided discussion regarding the estimated percent reductions for these CTG categories that supported the EPA's position that applying the new 2007 and 2008 CTG-recommended limits as a whole will result in net VOC emissions reductions. Despite the demonstration that implementing the CTG-recommended approach would not interfere with attainment of, or reasonable progress towards, attainment of the ozone standard for the HGB and DFW areas, the EPA submitted comments on this rulemaking indicating that in order for the proposed rules to be approved as RACT, the state must also demonstrate that the existing Chapter 115 limits for these CTG categories, which were based on the EPA's original 1977 and 1978 recommendations, are no longer technologically or economically feasible.

As discussed elsewhere in this preamble, the commission contends that by promulgating higher CTG-recommended RACT limits for these source categories in 2007 and 2008, the EPA has established that the original 1977 and 1978 recommended limits, and thus the existing Chapter 115 limits, are no longer technologically or economically feasible. However, the EPA's CTG documents did not specifically explain why the lower limits included in the 1977 and 1978 CTG recommendations were no longer technologically or economically feasible. In absence of any specific information indicating that the existing Chapter 115 limits for these source categories are not technologically or economically

feasible, and given the EPA's stated intention to disapprove the rules without such a demonstration, the commission is obligated under the FCAA, §172(c)(1) and §182(b)(2) to revise the proposed limits for these source categories to only include the 2007 and 2008 CTG-recommended limits that are equivalent to or lower than the existing limits. Where the EPA's 2007 and 2008 CTG-recommended limits are less stringent than the original CTG-recommended limits, the commission is retaining the original 1977 and 1978 emission limits in the current rule, except for high performance architectural coatings for the miscellaneous metal parts and products coatings rules.

The EPA only addressed the technological and economic feasibility issues associated with high performance architectural coatings in support of its presumptive RACT recommendations in the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG. The commission agrees with the EPA that the 6.2 lb VOC/gal coating constitutes RACT for this coating type and that promulgating a VOC limit less than 6.2 lb VOC/gal coating may restrict the application of liquid high performance architectural coatings that are currently available and in use today. The cost of converting to powder coatings or installing and operating add-on controls to meet a lower limit is not a reasonable alternative compared to the emission reduction that would be achieved. In light of this information, as provided in the EPA's 2008 CTG, the commission has determined a VOC limit of 6.2 lb VOC/gal coating for high performance architectural coatings to be RACT. The commission contends that the adoption of this coating VOC limit for high

performance architectural coatings, which is higher than in the existing Chapter 115 rules, does not interfere with attainment of, or reasonable progress towards, attainment of the ozone standard for the HGB and DFW areas. Therefore, the commission is adopting to retain the EPA's 2008 Miscellaneous Metal and Plastic Parts CTG-recommended VOC limit of 6.2 lb VOC/gal coating for high performance architectural coatings in the miscellaneous metal parts and products coatings rules.

The existing Chapter 115, Subchapter E, Division 2 rules were revised in July 2000 (25 TexReg 6754) to reflect a rule interpretation that determined the rules should be applied to original equipment manufacturers, off-site job shops that coat new or used parts or products, and designated on-site maintenance shops that re-coat used parts or products. However, the EPA's 1977 CTG recommendations for this source category, which were the basis for the Division 2 rules, were clearly not intended to apply to designated on-site maintenance shops that re-coat used parts or products (EPA-450/2-78-015). The EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG recommendations also do not apply to designated on-site maintenance shops (EPA-453/R-08-003).

Accordingly, the commission has determined that it is not necessary to apply these RACT requirements to designated on-site maintenance shops that re-coat used parts or products in order to meet the mandates of FCAA, §172(c)(1) and §182(b)(2). Therefore, in response to comments received on this rulemaking, the commission is revising the

Division 2 rules for the DFW and HGB areas in §115.427 to exempt the coating of miscellaneous metal parts and products at a designated on-site maintenance shop that was exempt from VOC limits in §115.421(a)(9) prior to January 1, 2012, or that begins operation on or after January 1, 2012. The coating of miscellaneous metal parts and products at a designated on-site maintenance shop that was subject to the VOC limits in §115.421(a)(9) prior to January 1, 2012, remains subject to this division. For purposes of this exemption, a designated on-site maintenance shop is an area at a site where used miscellaneous metal parts or products are re-coated on a routine basis. Additionally, in response to comments on this rulemaking, the commission is excluding designated on-site maintenance shops from the miscellaneous metal parts and products coatings rule applicability in Division 5, §115.450(a).

The adopted revisions will not interfere with the state's demonstration of attainment with the 1997 eight-hour ozone NAAQS, reasonable further progress towards attainment, or any other applicable requirement of the FCAA. The adopted revisions prevent any potential backsliding concerns by requiring sources that are currently complying with these rules in Division 2 to continue to meet these VOC limits. The adopted revisions are consistent with the intent of EPA's 1977 and 2008 CTG RACT recommendations for miscellaneous metal parts and products coatings and the commission maintains the rules continue to satisfy RACT requirements for this CTG emission source category. Regulating the coating of miscellaneous metal parts and

products at a new designated on-site maintenance shop is not appropriate since VOC reductions do not advance attainment of the 1997 eight-hour ozone standard for the DFW and HGB areas, as demonstrated in the reasonably available control measures analyses in the DFW Attainment Demonstration SIP Revision for the 1997 Eight-Hour Ozone Standard scheduled for adoption on November 16, 2011, and in the HGB Attainment Demonstration SIP Revision for the 1997 Eight-Hour Ozone Standard adopted on March 10, 2010.

Based on this analysis, the commission has determined the adopted rules for Large Appliance Coatings, Metal Furniture Coatings, and Miscellaneous Metal and Plastic Parts Coatings will not interfere with the state's demonstration of attainment with the 1997 eight-hour ozone NAAQS, reasonable further progress towards attainment, or any other applicable requirement of the FCAA.

Section by Section Discussion

The commission adopts amendments to Division 2 in Chapter 115, Subchapter E, entitled *Surface Coating Processes*, to accommodate the changes made in the other divisions in Chapter 115 affected by this rulemaking as a result of the EPA's CTG recommendations.

The commission adopts amendments to Division 3 in Chapter 115, Subchapter E,

entitled *Flexographic and Rotogravure Printing*, to implement the EPA's 2006 Flexible Package Printing CTG recommendations for this emission source category.

The commission adopts new Division 5 in Chapter 115, Subchapter E, entitled *Control Requirements for Surface Coating Processes*, to accommodate new coating categories and rule requirements being adopted in response to the Large Appliance Coatings; Metal Furniture Coatings; Automobile and Light-Duty Truck Assembly Coatings; Paper, Film, and Foil Coatings; and Miscellaneous Metal and Plastic Parts Coatings CTG documents. Adopted new Division 5 applies in the DFW and HGB areas and contains the Chapter 115 rules applicable to the surface coating categories that are currently located in Division 2 except where the commission has determined the controls in the commission's existing rules are not RACT for these areas. Adopted new Division 5 improves readability of the Chapter 115 rules by separating the requirements for the surface coating processes in the DFW and HGB areas affected by the adopted rulemaking from the requirements applicable to locations not affected by the adopted rulemaking, except for the surface coating processes conducted at designated on-site maintenance shops in the DFW and HGB areas, which will remain subject to Division 2, as discussed elsewhere in this preamble.

The commission adopts new Division 6 in Chapter 115, Subchapter E, entitled *Industrial Cleaning Solvents*, to implement the EPA's 2007 Industrial Cleaning Solvents CTG

recommendations for this new emission source category in the DFW and HGB areas.

The commission adopts new Division 7 in Chapter 115, Subchapter E, entitled *Miscellaneous Industrial Adhesives*, to implement the CTG recommendations for this new emission source category in the DFW and HGB areas.

In addition to the adopted amendments to implement RACT for the specified surface coating processes, flexible package printing processes, industrial cleaning solvents, and miscellaneous industrial adhesives, the commission adopts grammatical, stylistic, and various other non-substantive changes to update the rules in accordance with current *Texas Register* style and format requirements, improve readability, establish consistency in the rules, and conform to the standards in the *Texas Legislative Council Drafting Manual*, February 2011. Such changes include appropriate and consistent use of acronyms, punctuation, section references, and certain terminology like *that*, *which*, *shall*, and *must*. References to the *Dallas/Fort Worth area* and the *Houston/Galveston area* have been updated to the *Dallas-Fort Worth area* and the *Houston-Galveston-Brazoria area*, respectively to be consistent with current terminology for the region. These non-substantive changes are not intended to alter the existing rule requirements in any way and are not specifically discussed in this preamble.

SUBCHAPTER E, SOLVENT-USING PROCESSES

DIVISION 2, SURFACE COATING PROCESSES

Section 115.422, Control Requirements

The commission adopts minor non-substantive changes to the introductory paragraph of existing §115.422 and to §115.422(6). The changes update rule language necessary to comply with current rule formatting standards. These changes are not intended to alter the meaning of §115.422.

Since proposal, §115.422(1)(A) has been revised to ensure units are used consistently throughout this and other divisions in Chapter 115. The adopted change is non-substantive and is not intended to change the meaning of this requirement.

The commission adopts §115.422(7) to indicate that beginning March 1, 2013, the owner or operator of a paper surface coating line subject to this division and located in the DFW or HGB areas is required to implement the work practices specified in subparagraphs (A) - (E) to limit VOC emissions from storage, mixing, and handling of cleaning and cleaning-related waste materials. The adopted work practices in subparagraphs (A) - (E) include: storing all VOC-containing cleaning materials in closed containers; ensuring that mixing and storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials; minimizing spills of VOC-containing cleaning materials; conveying VOC-

containing cleaning materials from one location to another in closed containers or pipes; and minimizing VOC emissions from cleaning of storage, mixing, and conveying equipment.

Section 115.427, Exemptions

The commission adopts a revision to §115.427(a)(3) to clarify that the emission calculations used in surface coating activities that are not addressed by the surface coating categories of adopted new §115.450(a) are excluded. The adopted revision is necessary to ensure the coatings and solvents used in the surface coating categories transitioning from applicability in this division to proposed new Division 5 continue to be included in the emissions calculations that determine exemption for the surface coating categories that are not transitioning to applicability in Division 5.

The commission adopts §115.427(a)(7) to indicate that beginning March 1, 2013, in the DFW and HGB areas, the surface coating categories listed in subparagraphs (A) - (E) will be exempt from the requirements in Division 2 if they are subject to the requirements in adopted new Division 5. Adopted subparagraphs (A) and (B) list large appliance coating and metal furniture coating, respectively. Adopted subparagraph (C) lists miscellaneous metal parts and products coating. Adopted subparagraph (D) lists each paper coating line with the potential to emit equal to or greater than 25 tpy of VOC emissions from all coatings applied. For reasons discussed elsewhere in this preamble,

the commission is not adopting rules to implement the EPA's CTG recommendation to completely exempt individual paper coating lines from all coating VOC emission limits if the emissions generated are less than 25 tpy. Paper coating lines may already be required to comply with the existing requirements in this division and exempting them from the coating VOC emission limits could result in backsliding. The paper coating lines that remain subject to this division on or after the March 1, 2013, compliance date would not be subject to any portion of the Division 5 rules affecting paper, film, and foil coating processes. Adopted subparagraph (E) lists automobile and light-duty truck manufacturing coating.

Adopted §115.427(a)(7) is necessary to clarify that beginning March 1, 2013, the surface coating categories proposed for regulation in new Division 5 are no longer required to comply with any portion of the requirements in Division 2 and to minimize potential dual applicability between Divisions 2 and 5. The commission acknowledges that it is possible that some facilities may still be subject to both divisions if the facilities perform coatings operations for multiple categories currently subject to Division 2.

In response to comments received on the proposed rulemaking, the commission is adopting §115.427(a)(8) to exempt in the DFW and HGB areas the re-coating of used miscellaneous metal parts and products at a designated on-site maintenance shop that was exempt from VOC limits in §115.421(a)(9) prior to January 1, 2012, or that begins

operation on or after January 1, 2012. The re-coating of used miscellaneous metal parts and products at a designated on-site maintenance shop that was subject to the VOC limits in §115.421(a)(9) prior to January 1, 2012, remains subject to this division. For purposes of this exemption, a designated on-site maintenance shop is an area at a site where used miscellaneous metal parts or products are re-coated on a routine basis. January 1, 2012, is the beginning of the calendar year shortly after the expected effective date of this rulemaking. The adopted revisions prevent any potential backsliding concerns by requiring sources that are currently complying with these rules in Division 2 to continue to meet the VOC emission limits. The adopted revisions are consistent with the intent of EPA's 1977 and 2008 CTG RACT recommendations for miscellaneous metal parts and products coatings and the commission maintains the rules continue to satisfy RACT requirements for this CTG emission source category.

Section 115.429, Counties and Compliance Schedules

Since proposal, §115.429(b) has been revised to remove language made obsolete by the passing of the compliance date. Adopted §115.429(b) states that in Ellis, Johnson, Kaufman, Parker, and Rockwall Counties the compliance date has already passed and the owner or operator of each surface coating operation shall continue to comply with this division. Prior to the adopted change, §115.429(b) required compliance no later than June 15, 2007.

Since proposal, §115.429(c) has been revised to remove language made obsolete by the passing of the compliance date. Adopted §115.429(c) states that in Hardin, Jefferson, and Orange Counties the compliance date has already passed and the owner or operator of each shipbuilding and ship repair operation that, when uncontrolled, emits a combined weight of volatile organic compounds from ship and offshore oil or gas drilling platform surface coating operations equal to or greater than 50 tpy and less than 100 tpy shall continue to comply with this division. Prior to the adopted change, §115.429(c) required compliance no later than December 31, 2006.

The commission adopts subsection (d) to indicate that the owner or operator of a paper surface coating process shall comply with the requirements in §115.422(7) no later than March 1, 2013. The March 1, 2013, compliance date provides affected owners and operators approximately a year and a half to make any necessary changes and ensures that any VOC emission reductions achieved by the adopted rule will occur prior to the ozone season in the DFW area.

SUBCHAPTER E, SOLVENT-USING PROCESSES

DIVISION 3, FLEXOGRAPHIC AND ROTOGRAVURE PRINTING

Section 115.430, Applicability and Definitions

The commission adopts a change to the title of §115.430 from *Flexographic and Rotogravure Printing Definitions* to *Applicability and Definitions* to reflect the

addition of rule applicability in this section's content.

To accommodate adopted subsection (a), the flexographic and rotogravure printing definitions currently located in §115.430(1) - (4) are adopted as §115.430(b)(4) - (7), respectively. The existing introductory paragraph for §115.430 has been deleted and replaced with updated language for consistency with other Chapter 115 rules.

The commission adopts subsection (a) to indicate that the requirements in this division apply to the specified flexographic and rotogravure printing processes in paragraphs (1) - (4) that are located in the Beaumont-Port Arthur (BPA), DFW, El Paso, and HGB areas and in Gregg, Nueces, and Victoria Counties, unless exempted in adopted new §115.431. The BPA and El Paso areas and Gregg, Nueces, and Victoria Counties are included in adopted subsection (a) because these locations are affected by the existing flexographic and rotogravure printing rules; however, no new requirements are being adopted for printing processes in these locations. Adopted subsection (a) establishes consistency with other Chapter 115 rules and improves the readability of the rule by first describing the units affected by the subsequent requirements.

Adopted paragraph (1) lists packaging rotogravure printing lines. Adopted paragraph (2) lists publication rotogravure printing lines. Adopted paragraph (3) lists flexographic printing lines. Adopted paragraph (4) lists flexible package printing lines. The adopted

new applicability format is not intended to alter the existing applicability for this division.

Adopted subsection (b) includes the new definitions related to flexible package printing in addition to the existing definitions in §115.430. Adopted subsection (b) also specifies that unless the context clearly indicates otherwise or unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382), in 30 TAC §§3.2, 101.1, or 115.10, the terms used in this division have the meanings commonly used in the field of air pollution control.

Since proposal, the commission has revised adopted subsection (b) in order to define cleaning operations associated with flexible package printing. Adopted paragraph (1) defines *Cleaning operation* as the cleaning of a press, press parts, or removing dried ink from areas around a press. Cleaning operation does not include cleaning electronic components of a press, cleaning in pre-press (e.g., platemaking) or post-press (e.g., binding) operations, or use of janitorial supplies (e.g., detergents or floor cleaners) to clean areas around a press. Cleaning would also not include parts washers or cold cleaners. This definition is adopted directly from the EPA's 2006 CTG description of flexible package printing cleaning operations. Establishing this definition eliminates the potential for the cleaning operations intended to be regulated in this division from mistakenly being identified as general cleaning solvent operations that would require

compliance with the industrial cleaning solvents rules in adopted new Division 6.

Adopted paragraph (2), proposed as paragraph (1), defines *Daily weighted average* as the total weight of VOC emissions from all inks and coatings subject to the same VOC content limit in §115.432, divided by the total volume or weight of those materials (minus water and exempt solvent), or divided by the total volume or weight of solids applied to each printing line per day. Since proposal, the definition has been revised to indicate that water and exempt solvent are only excluded from the daily weighted average calculation where the VOC limits in §115.432 exclude these materials. Since the VOC limits in §115.432(c) include water and exempt solvent, the daily weighted average calculations must reflect the concentration of water and exempt solvent. To accommodate the distinction between VOC emission limit and VOC content limit made in §115.432(c)(1)(A) and (B), the word *content* has been deleted from the adopted definition. Additionally, because this definition applies universally to all of the printing processes subject to Division 3, the phrase *inks and coatings* has been replaced with *materials* to more appropriately indicate that the types of materials for which the daily weighted average is calculated depends on the materials that are regulated under the control requirements in §115.432. For example, the printing processes subject to a control requirement in §115.432(a) is only required to control the VOC content of inks. The adopted definition is intended to clarify the term as used in the existing monitoring and recordkeeping requirements for the rotogravure and flexographic printing processes

not affected by this adopted rulemaking and to facilitate compliance for flexible package printing processes affected by the adopted control requirements in §115.432(c).

Adopted paragraph (3), proposed as paragraph (2), defines *Flexible package printing* as flexographic or rotogravure printing on any package or part of a package the shape of which can be readily changed including, but not limited to, bags, pouches, liners, and wraps using paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials. Although flexible package printing is not specifically defined in the current rule, the process is represented under the existing definition of packaging rotogravure printing if the package materials are printed on a rotogravure press, or represented under the existing definition of flexographic printing if the package materials are printed on a flexographic press. The commission also adopts revising the term *Flexographic printing process* to remove the word *process* for consistency with the other defined terms in this subsection.

Section 115.431, Exemptions

The commission adopts new §115.431 to list the exemptions currently contained in §115.437 that apply to all flexographic and rotogravure printing processes subject to this division and to incorporate the proposed exemptions recommended in the EPA's 2006 Flexible Package Printing CTG. Adopted new §115.431 establishes consistency with other Chapter 115 rules and makes the rule easier to read by clearly identifying the

flexographic and rotogravure printing lines that are exempt from all or portions of the subsequent rule requirements.

Adopted new subsection (a) lists the exemptions that apply for the BPA, DFW, El Paso, and HGB areas. Adopted new paragraph (1) is the existing exemption in §115.437(a)(1) with non-substantive changes necessary to comply with rule formatting standards. Adopted new paragraph (2) is the existing exemption in §115.437(2) with non-substantive changes necessary to comply with rule formatting standards.

Adopted new paragraph (3) provides an exemption from the requirements in adopted §115.432(c) and (d) beginning March 1, 2013, in the DFW and HGB areas for all flexible package printing lines located on a property that have a combined weight of total actual VOC emissions less than 3.0 tpy from all coatings and associated cleaning operations. Properties qualifying for this exemption will not be subject to the more stringent adopted VOC control requirements for flexible package printing in §115.432(c) but will remain applicable to the existing controls in §115.432(a), unless the property meets another exemption under this section. As discussed elsewhere in this preamble, the commission is not adopting the EPA's 2006 CTG recommendation to completely exempt these flexible package printing processes from the rule requirements. Flexible package printing processes co-located on a property with other flexographic and rotogravure printing processes may already be required to comply with the current Chapter 115

rules; therefore, providing the CTG-recommended exemption could result in backsliding.

Adopted new paragraph (4) provides an exemption from the coating VOC limits in adopted §115.432(c) for individual flexible package printing lines with the maximum potential to emit from all coatings less than 25 tpy in the DFW and HGB areas beginning March 1, 2013. As discussed elsewhere in this preamble, the commission is not adopting the EPA's 2006 CTG recommendation to exempt these printing lines from all coating VOC limits. Flexible package printing lines qualifying for this exemption will remain subject to the existing ink VOC control requirements, unless the printing line or printing process meets another exemption under this section, to prevent potential backsliding for units currently required to comply with the Chapter 115 regulations.

Adopted new subsection (b) is the existing exemption in §115.437(b), related to sources in Gregg, Nueces, and Victoria Counties, with only non-substantive edits necessary to comply with current rule formatting standards.

Section 115.432, Control Requirements

The commission adopts the amendment to subsection (a) to clarify that beginning March 1, 2013, this subsection no longer applies to flexible package printing lines in the DFW and HGB areas that are required to comply with the requirements in adopted

subsection (c). The adopted amendment prevents flexible package printing lines from being subject to duplicative control requirements. Additionally, adopted subsection (a) incorporates other non-substantive edits necessary to comply with current rule formatting standards.

The commission replaces the current text in existing paragraph (1) with updated language to require the owner or operator to limit the VOC emissions from solvent-containing ink used on each packaging rotogravure, publication rotogravure, flexible package, and flexographic printing lines by using one of the options in subparagraphs (A), (B), or (C). Adopted paragraph (1) affects the same printing lines as existing paragraph (1) but adds flexible package printing lines to clarify that these printing lines remain subject to the control requirements in this paragraph if not subject to the new control requirements in adopted subsection (c).

The commission adopts non-substantive changes to subparagraphs (A) - (C) necessary to comply with current rule formatting standards. In addition, the commission adopts minor amendments to subparagraph (C) to replace the phrase *shall be required to provide for* with *must achieve*, and *reduction in VOC emissions* with *control efficiency*. The adopted changes update the existing language to establish consistency with terminology used in the adopted requirements for this division and other Chapter 115 rules. The adopted changes are not intended to alter the meaning of this requirement.

Adopted §115.432(a)(1)(C)(iv) specifies that flexible package printing processes using a vapor control system must continue to comply with the overall control efficiency requirement corresponding to the type of press used to conduct the printing. Adopted §115.432(a)(1)(C)(iv) is intended to provide clarification and is not intended to impose additional requirements on flexible package printing owners and operators.

The commission adopts the amendment to paragraph (2) to replace *Any graphic arts facility that becomes* with *All flexographic and rotogravure printing lines that become*. The commission also adopts revisions to this paragraph to indicate that the project must meet one of the requirements in subparagraphs (A) or (B). The adopted non-substantive changes to paragraph (2) and subparagraphs (A) and (B) are intended to clarify the existing provisions and are necessary to comply with current rule formatting standards. The commission has corrected a typographical error made in the proposed rule; the adopted change more appropriately refers to the processes affected by this provision.

The commission adopts replacing subsection (b) with updated language to indicate that in Gregg, Nueces, and Victoria Counties, the owner or operator shall limit the VOC emissions from solvent-containing ink used on each packaging rotogravure, publication rotogravure, flexible package, and flexographic printing lines by using one of the options in this subsection. The acknowledgement of flexible package printing in the subsection is

intended for clarification and is not intended to impose any additional requirements since this printing process is currently subject to the requirements corresponding to the type of press used to conduct the flexible package material printing.

The commission adopts non-substantive changes to paragraphs (1) - (3) necessary to comply with rule formatting standards. In addition, the commission adopts minor amendments to paragraph (3) to replace the phrase *shall be required to provide for* with *must achieve*, and *reduction in VOC emissions* with *control efficiency*. The adopted changes update the existing language with terminology used for consistency with other Chapter 115 rules. The adopted changes are not intended to alter the meaning of this requirement.

The commission adopts paragraph (3)(D) to indicate that a flexible package printing process must meet the overall control efficiency in subparagraph (B) or (C), depending on the type of press used. Flexible package printing processes are currently required to meet either the packaging rotogravure printing process overall control efficiency if the flexible package materials are printed on a rotogravure press, or the flexographic printing overall control efficiency if the flexible package materials are printed on a flexographic press.

Adopted subsection (c) establishes the control requirements that apply to each flexible

package printing line in the DFW and HGB areas, unless specifically exempt in §115.431, beginning March 1, 2013. Except as specifically discussed elsewhere in this preamble, adopted subsection (c) implements the EPA's recommendations in the 2006 Flexible Package Printing CTG that the commission has determined are RACT. In order to clarify the materials the control requirements apply to and for consistency throughout this division, the commission has replaced the word *materials* with *coatings* where it appeared in the proposed rules. These changes are not specifically discussed in this Section by Section Discussion portion of the preamble.

Adopted paragraph (1) requires the owner or operator to limit the VOC emissions from coatings applied on each flexible package printing line by using one of the options in subparagraphs (A) - (C). Adopted paragraph (1) also indicates that these limitations are based on the daily weighted average. Determining the VOC content of coatings applied to flexible package materials on a daily weighted average is based on the suggested averaging period in the EPA's 2006 CTG. Although the EPA's 2006 CTG is not clear on which control requirement options are intended to be used in order to meet the VOC limits in subparagraphs (A) and (B), the commission presumes that owners and operators may elect to comply with either VOC limit using low-VOC coatings or using coatings in combination with the operation of a vapor control system.

Adopted subparagraph (A) limits the VOC emissions of the coatings to 0.80 pound of

VOC per pound of solids applied. Adopted subparagraph (A) indicates that the VOC emission limit must be met through the use of coatings or a combination of coatings and the operation of a vapor control system. For consistency with the use of significant figures, a zero has been added to the proposed 0.80 pound of VOC per pound of solids VOC limit. In response to comments received on requirements similar to this subparagraph, subparagraph (A) has been revised to replace the term *low-VOC materials* with *coatings*, and not with *materials* for reasons discussed elsewhere in this Section by Section Discussion portion of the preamble, to clarify that under this option the VOC content of coatings used do not have to meet the VOC emission limit in this subparagraph; instead, the combination of the VOC from the coatings used and the vapor control system efficiency must reduce the VOC emissions generated to less than or equal to the VOC emission limit. Similarly, the rule has been revised since proposal to replace *content limit* with *emission limit* to more appropriately apply to both the options available, whether the owner or operator limits the content of the VOC in a coating or uses coatings in conjunction with the operation of a vapor control system, to demonstrate compliance with this subparagraph. This change indicates that the VOC content is not necessarily restricted when using the coating in combination with the operation of a vapor control system compliance option. These changes provide clarification without altering the meaning of this subparagraph. Lastly, non-substantive changes were made to the proposed language to ensure consistency with other similar requirements in this subchapter.

Adopted subparagraph (B) limits the VOC emissions from the coatings to 0.16 pound of VOC per pound of coating applied. Adopted subparagraph (B) indicates that the VOC emission limit must be met through the use of low-VOC coatings or a combination of coatings and the operation of a vapor control system. In response to comments received on requirements similar to this subparagraph, the content has been revised to replace the term *low-VOC materials* with *coatings*, and not with *materials* for reasons discussed elsewhere in this Section by Section Discussion portion of the preamble, to clarify that under this option the VOC content of coatings used do not have to meet the VOC content limit in this subparagraph; instead, the combination of the VOC from the coatings used and the vapor control system efficiency must reduce the VOC generated to less than or equal to the VOC content limit. Similarly, at proposal, this control option referred to 0.16 pound of VOC per pound of coating as a content limit. However, the rule has been revised to replace *content limit* with *emission limit* to more appropriately apply to both the options available, whether the owner or operator limits the content of the VOC in a coating or uses coatings in conjunction with the operation of a vapor control system, to demonstrate compliance with this subparagraph. This change indicates that the VOC content is not necessarily restricted when using the coating in combination with the operation of a vapor control system compliance option. These changes provide clarification without altering the meaning of this subparagraph. Lastly, non-substantive changes were made to the proposed language to ensure consistency

with other similar requirements in this subchapter.

Adopted subparagraph (C) requires the operation of a vapor control system to achieve an overall control efficiency of at least 80% by weight. This option provides an alternative method for affected flexible package printers where low-VOC coatings are not sufficient to achieve the desired product quality or efficacy. As discussed elsewhere in this preamble, the commission is not adopting the EPA's CTG recommendation to correlate the overall control efficiency of add-on control equipment with the date the equipment was first installed. The most stringent CTG recommendation for the overall control efficiency of add-on controls in the CTG is 80%. The commission expects that affected flexible package printers choosing to comply with the control requirement in adopted subparagraph (C) are sources with control equipment capable of meeting at least an 80% overall control efficiency.

Adopted paragraph (2) specifies that a flexible package printing line that becomes subject to paragraph (1) by exceeding the exemption limits in §115.431(a) is subject to the provisions of this subsection even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with paragraph (1) of this subsection and one of the conditions in subparagraphs (A) or (B) is met.

Adopted subparagraph (A) requires the project that caused throughput or the emission rate to fall below the exemption limits in §115.431(a) to be authorized by a permit, permit amendment, standard permit, or permit by rule required by 30 TAC Chapters 106 or 116. Proposed subparagraph (A) also specifies that if a permit by rule is available for the project, the owner or operator shall continue to comply with paragraph (1) of this subsection for 30 days after the filing of documentation of compliance with that permit by rule.

Adopted subparagraph (B) requires that if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing. This is an existing requirement for printing lines subject to the requirements in subsection (a), and is incorporated into adopted subsection (c).

Adopted paragraph (3) requires an owner or operator applying coatings in combination with a vapor control system to meet the VOC emission limit in paragraph (1)(A) or (B) of this subsection using the equation provided. This adopted new control requirement is necessary to demonstrate that the overall control efficiency of the vapor control system, when used in conjunction with coatings, is sufficient to meet the VOC limits in paragraph (1)(A) or (B). Adopted paragraph (3) contains the equation to determine the overall control efficiency needed to meet the specified VOC limits. The adopted equation

in paragraph (3) is the same as the equation in existing §115.423(3)(A) with revision to conform to the circumstances in this rule. The adopted paragraph also requires control device and capture efficiency testing to be performed in accordance with the testing requirements in §115.435(a). Since proposal, adopted paragraph (3) has been revised to update the variable descriptions. In the proposed rule, one of the descriptions for the equation variables incorrectly referenced a figure in a different Chapter 115 rule. Additionally, since proposal, the equation variables have been revised for clarification to ensure the variable units are consistent with one another and to direct the owner or operator to base the VOC content of the coatings on either the daily weighted average of VOC emissions or the maximum VOC emissions. Also, for reasons discussed elsewhere in this Section by Section Discussion portion of the preamble, the term *low-VOC* has been deleted from the instances where *low*-VOC coatings is used in reference to the combination of low-VOC coatings and the operation of a vapor control system option.

Adopted subsection (d) requires the owner or operator of a flexible package printing process to implement the work practices in paragraphs (1) and (2) for cleaning materials. Adopted paragraph (1) requires keeping all cleaning solvents and used shop towels in closed containers. Adopted paragraph (2) requires conveying cleaning solvents from one location to another in closed containers or pipes.

Section 115.433, Alternate Control Requirements

The commission adopts revisions to the existing provisions in §115.433 to consolidate redundant provisions currently located in subsections (a) and (b) under a single "implied (a)" under §115.433. Adopted "implied (a)" in §115.433 makes the provisions for alternate control requirements applicable to the owner or operator of a flexographic or rotogravure printing line subject to this division, regardless of the printing property location. The adopted amendment to §115.433 would apply to the locations currently listed in either existing subsection (a) or (b); the BPA, DFW, El Paso, and HGB areas and Gregg, Nueces, and Victoria Counties.

Section 115.435, Testing Requirements

The commission adopts non-substantive revisions to subsection (a) necessary to comply with rule formatting standards. The commission also adopts revisions to clarify that the purpose of the testing requirements in this section is to demonstrate compliance with the control requirements in §115.432. These changes are not intended to alter the meaning of this requirement.

The commission adopts non-substantive changes to paragraphs (1) - (5). The commission adopts paragraph (6) to include *as amended through October 18, 1983 (48 FR 48375)*. The adopted revision reflects the most recent amendment of this test procedure in the Code of Federal Regulations (CFR).

The commission adopts the renumbering of current paragraph (7) as adopted paragraph (8), and existing paragraph (8), regarding minor modifications to the methods, is adopted as paragraph (7).

Non-substantive revisions are adopted in paragraph (8), regarding capture efficiency testing, that are necessary to comply with current rule formatting standards and are not intended to alter the meaning of this requirement. The commission adopts updates to paragraph (8) to include *as amended through October 21, 1996 (61 FR 54559)*. In subparagraph (A), the commission also adopts updates to clause (ii) and subclause (I) to include *as amended through October 17, 2000 (65 FR 61761)*. The adopted revision reflects the most recent amendment of this test method in the CFR.

Adopted subparagraph (B)(i) replaces the existing text equation prescribed to determine the overall control efficiency using the gas/gas method for temporary total enclosures (TTE) with an equation under §115.435(a)(8)(B)(i) to conform to current rule formatting requirements and improve readability of the rule. The adopted equation and variables are identical to the text equation and variables in current §115.435(a)(7)(B)(i).

Adopted subparagraph (B)(ii) replaces the existing text equation prescribed to determine the overall control efficiency using the liquid/gas method for TTE with the

equation under §115.435(a)(8)(B)(ii) to conform to current rule formatting requirements and improve readability of the rule. The adopted equation and variables are identical to the text equation and variables in current §115.435(a)(7)(B)(ii).

Adopted subparagraph (B)(iii) replaces the existing text equation prescribed to determine the overall control efficiency using the gas/gas method for buildings or rooms used as an enclosure with an equation under §115.435(a)(8)(B)(iii) to conform to current rule formatting requirements and improve readability of the rule. The adopted equation and variables are identical to the text equation and variables in current §115.435(a)(7)(B)(iii).

Adopted subparagraph (B)(iv) replaces the existing text equation prescribed to determine the overall control efficiency using the liquid/gas method for buildings or rooms used as an enclosure with the equation under §115.435(a)(8)(B)(iv) to conform to current rule formatting requirements and improve readability of the rule. The adopted equation and variables are identical to the text equation and variables in current §115.435(a)(7)(B)(iv).

The commission removes the language in existing subparagraph (C)(i) - (iii) and replaces it with adopted language that requires the operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.436(a)

be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. Adopted subparagraph (C) states that the executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test. Adopted subparagraph (C) ensures the operational parameters tested in the initial performance test are representative of those during normal operation and consolidates the necessary provisions from subparagraph (C)(i) - (iii). Adopted subparagraph (C) does not substantively change the requirements for any facilities currently subject to the rule.

The commission deletes subparagraph (C)(i) regarding the prohibition on incorporating any error margin from the test into the results of the capture efficiency test. While the commission considers it inappropriate to include an error margin in the test results, it is not necessary to specifically include this prohibition in the rule.

The commission deletes existing subparagraph (C)(ii) because the requirement is no longer necessary since the date to accomplish the initial capture efficiency testing for the owner or operator of an affected rotogravure or flexographic printing line has already passed.

The commission deletes the language in existing subparagraph (C)(iii) regarding identification of the monitored parameters during the initial pretest meeting. As

discussed elsewhere in this preamble, the monitoring parameters for the capture systems along with other control devices are addressed under the existing provisions in §115.436, and it is unnecessary to include the provisions in current subparagraph (C)(iii). Furthermore, a pretest meeting with the source owner or operator may not always occur.

The commission adopts non-substantive revisions to subsection (b)(1) - (5) necessary to comply with rule formatting requirements that are not intended to alter the meaning of this provision. Additionally, the commission adopts updates to paragraph (6) to reflect the most recent amendment of testing procedures in the CFR.

The commission adopts subsection (c) to allow methods other than those specified in subsections (a)(1) - (6) and (b)(1) - (6) to be used if the alternative methods have been approved by the executive director and validated according to Method 301. The adopted provision for alternative methods is similar to alternative method provisions in other Chapter 115 rules.

Section 115.436, Monitoring and Recordkeeping Requirements

The commission deletes the existing language in subsection (a) and replaces it with updated text to indicate that in the BPA, DFW, El Paso, and HGB areas, the owner or operator of a rotogravure or flexographic printing line subject to this division, shall

comply with the monitoring and recordkeeping requirements in paragraphs (1) - (6). The adopted revision is not intended to alter the meaning of the existing language in subsection (a). The commission also adopts non-substantive revisions to paragraphs (1) - (6) to update language necessary to comply with rule formatting standards.

Additionally, the commission adopts revisions to paragraph (3) to remove the term *emission* from *emission control device* because control device is the term defined in §101.1. The adopted rule change provides clear and consistent use of terminology throughout the rule and is not intended to change the meaning of this requirement.

The commission adopts a non-substantive revision to paragraph (6) necessary to comply with rule formatting standards and to update the reference to §115.435 to reflect the adopted renumbering of exiting subsection (a)(7) to adopted subsection (a)(8).

The commission adopts non-substantive changes to subsection (b) and paragraphs (1) - (5) to update rule language for consistency with rule formatting standards and to update references. In subsection (b), the commission adopts replacing the term *facility* with *line* to provide clear and consistent use of terminology throughout the rule. These changes are not intended to alter the meaning of this requirement.

The commission adopts revisions to paragraph (3) to remove the term *emission* from

emission control device because control device is the term defined in §101.1. The adopted rule change provides clear and consistent use of terminology throughout the rule and is not intended to change the meaning of this requirement.

Adopted subsection (c) requires the owner or operator of a flexible package printing line in the DFW and HGB areas to comply with the monitoring and recordkeeping requirements contained in adopted paragraphs (1) - (7), beginning March 1, 2013. At proposal, the monitoring and recordkeeping requirements in this subsection appeared applicable only to the flexible package printing lines subject to §115.432(c) due to inconsistencies in the types of material records that were required to be kept under this subsection. However, in order to clarify that all flexible package printing lines subject to the control requirements in §115.432(a) and (c) are required to comply with this subsection, the rule has been revised to align the monitoring and recordkeeping requirements for the flexible package printers demonstrating compliance with §115.432(a) with those demonstrating compliance with §115.432(c). These changes do not expand the rules to require keeping records for all of the materials comprising the definition of coatings, as defined in §101.1, for owners and operators of flexible package printing lines subject to §115.432(a). Owners or operators subject to §115.432(a) are only required to maintain records of inks, the same records that the existing rules require. Ensuring all monitoring and recordkeeping requirements applicable to the owners or operators of flexible package printing are located in the same subsection improves the

clarity and readability of these rules.

Adopted paragraph (1) has not been modified since proposal because all flexible package printers are required to retain records of coatings used, including inks and adhesives, in order to demonstrate compliance with the control requirements in §115.432(c) or to demonstrate that a flexible package printing line does not meet the 25 tpy VOC emission threshold to become subject to the updated requirements in §115.432(c).

Adopted paragraph (2) has been modified to require the owner or operator of flexible package printing lines subject to the control requirements in §115.432(c), to maintain records of the quantity and type of each coating and solvent consumed if any of the coatings, as applied, exceed the applicable VOC content limits in §115.432(c). Adopted paragraph (2) also requires that records must be sufficient to demonstrate compliance with the applicable VOC content limit on a daily weighted average. The rule citation has been added to clarify that this paragraph only applies to the flexible package printers subject to §115.432(c) and not those in §115.432(a).

Adopted paragraph (3) has been added since proposal to specify that for flexible package printing lines that are subject to the control requirements in §115.432(a), the owner or operator shall maintain daily records of the quantity of each ink and solvent used at a facility subject to the requirements of an alternate means of control approved by the

executive director in accordance with §115.433 that allows the application of inks exceeding the applicable control limits. Adopted paragraph (3) requires that such records be sufficient to demonstrate compliance with the applicable emission limitation in §115.432(a) on a daily weighted average. Adopted paragraph (3) imposes the same requirements for a flexible package printing line that is subject to §115.432(a), as the requirements in existing §115.436(a)(2).

Adopted paragraph (4), proposed as paragraph (3), has been modified since proposal to require the owner or operator to install and maintain monitors to continuously measure and record operational parameters of any control device installed to meet applicable control requirements in §115.432(a) or (c). In addition, paragraph (4) requires that such records must be sufficient to demonstrate proper functioning of those devices to design specifications, including the parameters in adopted subparagraphs (A) - (D).

The remainder of the monitoring and recordkeeping requirements can be universally applied to the flexible package printers subject to §115.432(a) and (c) and have only been revised to renumber proposed paragraphs (4) - (6) as adopted paragraphs (5) - (7), respectively.

Section 115.437, Exemptions

The commission adopts the repeal of §115.437. As discussed elsewhere in the Section by

Section Discussion portion of this preamble, the commission adopts the relocation of the exemptions currently listed in §115.437 to adopted new §115.431, to improve readability of the rule by listing the exemptions before the rule requirements.

Section 115.439, Counties and Compliance Schedules

The commission adopts revisions to subsection (a) to clarify that the existing language indicates the compliance date for flexographic and rotogravure printing lines in the specified locations has passed, except the compliance date for flexible package printing processes affected by subsections (c) and (d).

The commission adopts the amendment to subsection (b) to clarify that the owner or operator of a flexible package printing process affected by the adopted rule requirements is not required to be in compliance until the dates specified in subsections (c) and (d). Since proposal, adopted subsection (b) has been revised to state that in Ellis, Johnson, Kaufman, Parker, and Rockwall Counties the compliance date has already passed and the owner or operator of a flexographic or rotogravure printing line subject to this division shall continue to comply with this division. Prior to adoption, subsection (b) required compliance no later than March 1, 2009.

Adopted subsection (c) requires the owner or operator of a flexible package printing line in the DFW and HGB areas to comply with the requirements in §115.432(c) and (d) and

§115.436(c), no later than March 1, 2013. The March 1, 2013, compliance date provides affected owners and operators approximately a year and a half to make any necessary changes and ensures that any VOC emission reductions achieved by the adopted rule will occur prior to the ozone season in the DFW area. Adopted subsection (c) also specifies that any testing required by §115.435 to demonstrate compliance with the requirements in adopted §115.432(c) must be completed and results submitted by no later than March 1, 2013.

Adopted subsection (d) requires the owner or operator of a flexible package printing line in the DFW and HGB areas that becomes subject to the requirements in this division after March 1, 2013, to comply with the requirements in this division no later than 60 days after becoming subject.

SUBCHAPTER E, SOLVENT-USING PROCESSES

DIVISION 5, CONTROL REQUIREMENTS FOR SURFACE COATING PROCESSES

Section 115.450, Applicability and Definitions

The commission adopts new §115.450, to clearly identify the surface coating processes affected by the requirements in this division and to define the terms relevant to those surface coating processes. Since proposal, the commission has replaced *coating process* or *coating operation* with *surface coating process* throughout this division to ensure the use of consistent terminology and because *surface coating process* is the term

defined in §115.450(b). Additionally, where a requirement referred to *exempt solvents* or *exempt compounds*, the commission has revised to *exempt solvent* for consistency with the terminology used throughout this division and in other divisions in Subchapter E. To ensure consistent use of units used throughout this division, only the English units have been retained in the adopted rules in this division. The adopted changes are non-substantive and are not intended to change the meaning of a requirement. These changes are not specifically discussed where they occur in the adopted new Division 5 rules.

Adopted new subsection (a) specifies that the requirements in this division apply to the surface coating processes listed in paragraphs (1) - (5) in the DFW and HGB areas and to the surface coating process listed in paragraph (6) in the DFW area. Adopted new subsection (a) does not apply to automobile and light-duty truck assembly surface coating processes in the HGB area because there are no facilities in the HGB area that will be subject to this CTG category. The commission has previously submitted a negative declaration for the automobile and light-duty truck assembly coating process category for the HGB area.

Adopted new paragraphs (1) and (2) list large appliance surface coating processes and metal furniture surface coating processes, respectively. The adopted applicability for large appliance and metal furniture surface coating processes is not limited to the

manufacturers of these parts and products; any process involving the coating of these substrates is subject to the adopted rule requirements. The adopted applicability in paragraphs (1) and (2) retains the existing applicability for these coating processes, as defined in existing §115.420(b)(6) and (7).

As a result of changes made in response to comments received on this rulemaking, the miscellaneous metal parts and products rule applicability has been limited to original equipment manufacturers and off-site job shops, and not designated on-site maintenance shops, as was proposed. The re-coating of used miscellaneous metal parts and products at designated on-site maintenance shops that was subject to §115.421(a)(9) prior to January 1, 2012, will remain subject to the Division 2 miscellaneous metal parts and products coatings rules. The re-coating of miscellaneous metal parts and products at a designated on-site maintenance shop that was exempt from §115.421(a)(9) prior to January 1, 2012, or that begins operation on or after January 1, 2012, are not subject to the miscellaneous metal parts and products coatings rules in either this division or Division 2. For purposes of this exemption, a designated on-site maintenance shop is an area at a site where used miscellaneous metal parts or products are re-coated on a routine basis. January 1, 2012, is the beginning of the calendar year shortly after the expected effective date of this rulemaking. The adopted revisions prevent any potential backsliding concerns by requiring sources that are currently complying with these rules in Division 2 to continue to meet these VOC limits. The adopted revisions are consistent

with the intent of EPA's 1977 and 2008 CTG RACT recommendations for miscellaneous metal parts and products coatings and the commission maintains the rules continue to satisfy RACT requirements for this CTG emission source category. For this reason, adopted paragraph (3) has been expanded to contain the applicability for the coating categories that were located in paragraph (4) at proposal. Adopted new paragraph (3) specifies that this division applies to miscellaneous metal part and product surface coating, miscellaneous plastic part and product surface coating, pleasure craft surface coating, and automotive/transportation and business machine plastic part surface coating at the original equipment manufacturer and off-site job shops that coat new and used parts and products or that re-coat used parts and products. Adopted new paragraph (3) mirrors the applicability recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG.

Adopted new paragraph (4) specifies that this division applies to motor vehicle materials applied to metal and plastic parts described in paragraph (3) at the original equipment manufacturer and off-site job shops that coat new parts and products or that re-coat used parts and products. Since proposal, the indication that these materials do not apply to operations other than automobile and light-duty truck assembly coating processes has been deleted because this is already stated in the definitions pertaining to motor vehicle materials located in subsection (b). Additionally, adopted new paragraph (4) states that motor vehicle materials are only regulated when applied to the parts and

products listed in adopted paragraph (3). The adopted rule applicability is the same as recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG.

Adopted new paragraph (5) specifies that this division applies to paper, film, and foil surface coating lines with the potential to emit from all coatings of VOC greater than or equal to 25 tpy when uncontrolled. The adopted applicability threshold is the same as recommended in the EPA's 2007 Paper, Film, and Foil Coatings CTG.

Adopted new paragraph (6) specifies that this division applies to automobile and light-duty truck assembly surface coating processes conducted by the original equipment manufacturer in the DFW area. Automobile and light-duty truck manufacturing coating, as defined in existing §115.420(b)(8)(A), is currently subject to Chapter 115. Adopted new paragraph (6) also incorporates operators that conduct automobile and light-duty truck surface coating processes under contract with the original equipment manufacturer in the DFW area into the rule applicability. The contract coaters referred to are those that coat new automobile and light-duty truck bodies, body parts for new automobiles or new light-duty trucks, and other parts that are coated along with these bodies or body parts under contract with the original equipment manufacturer. The adopted applicability is recommended in the EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG.

Adopted new subsection (b) includes the general definitions that apply to adopted new Division 5 and also specifies that unless the context clearly indicates otherwise or unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382), in §§3.2, 101.1, or 115.10, the terms used in this division have the meanings commonly used in the field of air pollution control. Unless specifically discussed, the definitions in this subsection are identical to those in existing §115.420(a).

Adopted new paragraph (1) defines *Aerosol coating (spray paint)* as a hand-held, pressurized, non-refillable container that expels an adhesive or a coating in a finely divided spray when a valve on the container is depressed.

Adopted new paragraph (2) defines *Air-dried coating* as a coating that is cured at a temperature below 194 degrees Fahrenheit (90 degrees Celsius); these coatings may also be referred to as low-bake coatings. Adopted new paragraph (2) is a definition recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG; however, the commission adopts the term as a general definition because it is used in the control requirements section for other coating categories affected by this division.

Adopted new paragraph (3) defines *Baked coating* as a coating that is cured at a temperature at or above 194 degrees Fahrenheit (90 degrees Celsius); these coatings may also be referred to as high-bake coatings. Adopted new paragraph (3) is a definition

recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG; however, the commission adopts the term as a general definition because it is used in the control requirements section for other coating categories affected by this division. In the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG a high-baked coating is defined as a coating that is cured at a temperature above 194 degrees Fahrenheit (90 degrees Celsius).

Adopted new paragraph (4) defines *Coating application system* as devices or equipment designed for the purpose of applying a coating material to a surface. The devices may include, but are not limited to, brushes, sprayers, flow coaters, dip tanks, rollers, knife coaters, and extrusion coaters.

Adopted new paragraph (5) defines *Coating line* as an operation consisting of a series of one or more coating application systems and associated flash-off area(s), drying area(s), and oven(s) wherein a surface coating is applied, dried, or cured. The coating line ends at the point the coating is dried or cured, or prior to any subsequent application of a different coating.

Adopted new paragraph (6) defines *Coating solids (or solids)* as the part of a coating that remains on the substrate after the coating is dried or cured.

Adopted new paragraph (7) defines *Daily weighted average* as the total weight of VOC emissions from all coatings subject to the same VOC limit, divided by the total volume or weight of those coatings, or divided by the total volume or weight of solids, delivered to the application system each day. Adopted new paragraph (7) indicates that coatings subject to different VOC content limits in §115.453 must not be combined for purposes of calculating the daily weighted average. Since proposal, the definition has been revised to indicate that water and exempt solvent are only excluded from the daily weighted average calculation where applicable. Owners and operators subject to the VOC limits in §115.453 that exclude water and exempt solvent must also exclude these materials when calculating the daily weighted average. Accordingly, since the paper, film, and foil VOC limits in §115.453(a)(4) include water and exempt solvent, the daily weighted average calculations for this category must reflect the concentration of water and exempt solvent. Adopted new paragraph (7) retains the method for determining the daily weighted average consistent with the existing definition in §115.420(a)(6) with changes to accommodate the various units and components unique to the coating category VOC limits that are based on the daily weighted average.

Adopted new paragraph (8) defines *Multi-component coating* as a coating that requires the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film. Adopted new paragraph (8) is a definition recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts

Coatings CTG; however, the commission adopts the term as a general definition because it is used in the control requirements section for other coating categories affected by this division.

Adopted new paragraph (9) defines *Normally closed container* as a container that is closed unless an operator is actively engaged in activities such as adding or removing material.

Adopted new paragraph (10) defines *One-component coating* as a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component. Adopted new paragraph (10) is a definition recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG; however, the commission adopts the term as a general definition because it is used in the control requirements section for other coating categories affected by this division.

Adopted new paragraph (11) defines *Pounds of volatile organic compounds (VOC) per gallon of coating (minus water and exempt solvent)* as the basis for emission limits for surface coating processes. Adopted new paragraph (11) retains the definition of pounds of VOC per gallon of coating as defined in existing §115.420(a)(9) with non-substantive changes that are not intended to alter the meaning of this definition. The adopted

definition in paragraph (11) includes the equation to calculate lb VOC/gal coating (minus water and exempt solvent) using values obtained from testing data or analytical data from the material safety data sheet (MSDS). Explanations of the variables follow the equation. Since proposal, the adopted new definition and equation have been revised in order to use terminology consistently throughout this division.

Adopted new paragraph (12) defines *Pounds of volatile organic compounds (VOC) per gallon of solids* as the basis for emission limits for surface coating processes. Adopted new paragraph (12) retains the definition of pounds of VOC per gallon of solids as defined in existing §115.420(a)(10) with non-substantive changes that are not intended to alter the meaning of this definition. The adopted definition in paragraph (12) includes the equation to calculate pounds of VOC per gallon of solids using values obtained from testing data or analytical data from the MSDS. Explanations of the variables follow the equation.

Adopted new paragraph (13) defines *Spray gun* as a device that atomizes a coating or other material and projects the particulates or other material onto a substrate.

Adopted new paragraph (14) defines *Surface coating processes* as operations that use a coating application system.

Adopted new subsection (c) provides specific surface coating definitions that are unique to each surface coating operation proposed for regulation in this division. Unless specifically discussed, the adopted definitions in this section are recommended in the EPA's CTG documents related to the surface coating categories subject to this division.

Adopted new paragraph (1) defines the terms that apply to automobile and light-duty truck manufacturing. The terms defined in adopted new subparagraphs (A) - (T) include: *Adhesive*; *Automobile and light-duty truck adhesive*; *Automobile and light-duty truck bedliner*; *Automobile and light-duty truck cavity wax*; *Automobile and light-duty truck deadener*; *Automobile and light-duty truck gasket/gasket sealing material*; *Automobile and light-duty truck glass-bonding primer*; *Automobile and light-duty truck lubricating wax/compound*; *Automobile and light-duty truck sealer*; *Automobile and light-duty truck trunk interior coating*; *Automobile and light-duty truck underbody coating*; *Automobile and light-duty truck weather strip adhesive*; *Automobile assembly surface coating process*; *Electrodeposition primer*; *Final repair*; *In-line repair*; *Light-duty truck assembly surface coating process*; *Primer-surfacer*; *Topcoat*; and *Solids turnover ratio (RT')*. The definitions of these terms are provided in adopted new paragraph (1) and are not specifically discussed in this preamble, except for those specific definitions that are not taken directly from the EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG.

Adopted new subparagraph (M) defines *Automobile assembly surface coating process* as the assembly-line coating of new passenger cars, or passenger car derivatives, capable of seating 12 or fewer passengers. This definition is derived from the existing definition of *Automobile coating* in §115.420(b)(12)(A)(i).

Adopted new subparagraph (Q) defines *Light-duty truck assembly surface coating process* as the assembly-line coating of new motor vehicles rated at 8,500 pounds gross vehicle weight or less and designed primarily for the transportation of property, or derivatives such as pickups, vans, and window vans. This definition is derived from the existing definition of *Light-duty truck coating* in §115.420(b)(12)(A)(ii).

Adopted new paragraph (2) defines the terms that apply to automotive/transportation and business machine plastic parts. The terms defined in adopted new subparagraphs (A) - (O) include: *Adhesion prime*; *Black coating*; *Business machine*; *Clear coating*; *Coating of plastic parts of automobiles and trucks*; *Coating of business machine plastic parts*; *Electrostatic prep coat*; *Flexible coating*; *Fog coat*; *Gloss reducer*; *Red coating*; *Resist coat*; *Stencil coat*; *Texture coat*; and *Vacuum-metalizing coatings*. The definitions of these terms are provided in adopted new paragraph (2) and are not specifically discussed in this preamble. The definitions are taken directly from the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG without substantive change. The *Coating of plastic parts of business machines* definition has been revised since

proposal to *Coating of business machine plastic parts* for consistency with the naming convention of other definitions in this section.

Adopted new paragraph (3) defines *Large appliance coating* as 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. Adopted new paragraph (3) retains the definition for large appliance coating as defined in existing §115.420(b)(6) without revision. Although the 2007 Large Appliance Coatings CTG recommends VOC limits for specific coating types, the CTG document does not include definitions for these specific coating types. The definitions in adopted new subparagraphs (A) - (F) incorporate the definitions recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG for this coating category due to the similarities in the substrates being coated, with minor non-substantive changes necessary to conform to current rule formatting standards. Since proposal, other non-substantive changes have also been made. In addition to these changes, a percent sign has been appended to the numerical value in the extreme high-gloss coating definition. The definitions in adopted new subparagraphs (A) - (F) are: *Extreme high-gloss coating*; *Extreme performance coating; Heat-resistant coating; Metallic coating; Pretreatment coating; and Solar-absorbent coating*.

In response to comments, the commission revised the definition of extreme performance coating for miscellaneous metal and plastic parts coating in §115.450(c)(5)(I) to include exposure to extreme environmental conditions, such as continuous outdoor exposure, as an extra stipulation that the metal or plastic parts may experience. The commission expects that some large appliances require the same type of protection as miscellaneous metal and plastic parts when exposed to extreme environmental conditions. Adopted new subparagraph (B) defines *Extreme performance coatings* as a coating used on a metal surface where the coated surface is, in its intended use, subject to: chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions; repeated exposure to temperatures in excess of 250 degrees Fahrenheit (121 degrees Celsius); repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents; or exposure to extreme environmental conditions, such as continuous outdoor exposure.

Adopted new paragraph (4) defines *Metal furniture coating* as the coating of metal furniture including, but not limited to, tables, chairs, wastebaskets, beds, desks, lockers, benches, shelves, file cabinets, lamps, and other metal furniture products or the coating of any metal part that will be a part of a nonmetal furniture product. Adopted new paragraph (4) retains the definition in existing §115.420(b)(7) without revision. Although the 2007 Metal Furniture Coatings CTG recommends VOC limits for specific

coating types, the CTG document does not include definitions for these specific coating types. The definitions in adopted new subparagraphs (A) - (F) incorporate the definitions recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG for similar coating categories with minor non-substantive changes necessary to conform to current rule formatting standards. The definitions in adopted new subparagraphs (A) - (F) are: *Extreme high-gloss coating*; *Extreme performance coating; Heat-resistant coating; Metallic coating; Pretreatment coating; and Solar-absorbent coating*.

In response to comments, the commission revised the definition of extreme performance coating for miscellaneous metal and plastic parts coating in §115.450(c)(5)(I) to include exposure to extreme environmental conditions, such as continuous outdoor exposure, as an extra stipulation that the metal or plastic parts may experience. The commission expects that some metal furniture requires the same type of protection as miscellaneous metal and plastic parts when exposed to extreme environmental conditions. Adopted subparagraph (B) defines *Extreme performance coating* as a coating used on a metal surface where the coated surface is, in its intended use, subject to: chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions; repeated exposure to temperatures in excess of 250 degrees Fahrenheit (121 degrees Celsius); repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents,

cleansers, or scouring agents; or exposure to extreme environmental conditions, such as continuous outdoor exposure.

Adopted new paragraph (5) lists the defined terms that apply to miscellaneous metal and plastic parts. Unless specifically discussed, the definitions in adopted new paragraph (5) incorporate the definitions recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG with minor non-substantive changes necessary to conform to current rule formatting standards. The terms defined in adopted new subparagraphs (A) - (HH) include: *Camouflage* coating; *Clear coat*; *Drum (metal)*; *Electric-dissipating coating*; *Electric-insulting varnish*; *EMI/RFI shielding*; *Etching filler*; *Extreme high-gloss coating*; *Extreme performance coating*; *Heat-resistant coating*; *High performance architectural coating*; *High temperature coating*; *Mask coating*; *Metallic coating*; *Military specification coating*; *Mold-seal coating*; *Miscellaneous metal parts and products*; *Miscellaneous plastic parts and products; Multi-colored coating*; *Off-site job shop*; *Optical coating*; *Pail (metal)*; *Pan-backing coating*; *Prefabricated architectural component coating*; *Pretreatment coating*; *Repair coating*; *Safety-indicating coating; Shock-free coating*; *Silicone-release coating*; *Solar-absorbent coating*; *Stencil coating*; *Touch-up coating*; *Translucent coating*; and *Vacuum-metalizing coating*. The adopted definitions of these terms are provided in adopted new paragraph (5) and are not specifically discussed in this preamble, except for those definitions that are not directly from the EPA's 2008

Miscellaneous Metal and Plastic Parts Coatings CTG or that the commission is adopting a modification to.

The definition of *Clear coat* in adopted new subparagraph (B) is a coating that lacks opacity or is transparent and may or may not have an undercoat that is used as a reflectant base or undertone color. This definition is identical to the existing definition in §115.420(b)(9)(A). The EPA's 2008 CTG provides a recommended definition for clear coat; however, revising it to reflect the CTG-recommended definition is unnecessary since the definition for the term in Chapter 115 and the CTG are synonymous.

The definition of *Drum (metal)* in adopted new subparagraph (C) is any cylindrical metal shipping container with a nominal capacity equal to or greater than 12 gallons but equal to or less than 110 gallons. The EPA's 2008 CTG provides a recommended definition for a drum; however, revising it to reflect the CTG-recommended definition is unnecessary since the definition for the term in Chapter 115 and the CTG are synonymous.

The definition of *Miscellaneous metal parts and products* in adopted new subparagraph (Q) is those specific parts and products listed in clauses (i) - (vii). Adopted new subparagraph (Q) retains the definition in existing §115.420(b)(9) with revision to delete the locations that are affected by the miscellaneous metal parts and products coating

rule requirements. The affected locations are more appropriately described in adopted new subsection (a). Adopted new clause (i) identifies large farm machinery (harvesting, fertilizing, and planting machines; tractors, combines, etc.). Adopted new clause (ii) identifies small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.). Adopted new clause (iii) identifies small appliances (fans, mixers, blenders, crock pots, dehumidifiers, vacuum cleaners, etc.). Adopted new clause (iv) identifies commercial machinery (computers and auxiliary equipment, typewriters, calculators, vending machines, etc.). Adopted new clause (v) identifies industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.). Adopted new clause (vi) identifies fabricated metal products (metal-covered doors, frames, etc.). Adopted new clause (vii) identifies any other category of coated metal products, including, but not limited to, those that 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 §115.420(b)(1) - (8) and (10) - (14) and in paragraphs (1) - (4) and (6) - (8) of this subsection. At proposal, the exclusion of those surface coating processes other than miscellaneous metal parts and products specified in §115.420(b)(1) - (8) and (10) - (14) of Division 2 was inadvertently left out. However, the adopted rule has been revised to incorporate

the exclusion in order to clarify that the parts and products characterized by these coating categories were not and are not included in the miscellaneous metal parts and products coating category.

In response to comments received on this rulemaking, the commission has adopted new subparagraph (R) to define *Miscellaneous plastic parts and products* as parts and products including, but not limited to the parts and products in adopted new clauses (i) - (xiii). Adopted new clause (i) lists molded plastic parts. Adopted new clause (ii) lists small and large farm machinery. Adopted new clause (iii) lists commercial and industrial machinery and equipment. Adopted new clause (iv) lists interior or exterior automotive parts. Adopted new clause (v) lists construction equipment. Adopted new clause (vi) lists motor vehicle accessories. Adopted new clause (vii) lists bicycles and sporting goods. Adopted new clause (viii) lists toys. Adopted new clause (ix) lists recreational vehicles. Adopted new clause (x) lists lawn and garden equipment. Adopted new clause (xi) lists laboratory and medical equipment. Adopted new clause (xii) lists electronic equipment. Adopted new clause (xiii) lists other industrial and household products. Excluded are those surface coating processes specified in §115.420(b)(1) - (8) and (10) - (14) and paragraphs (1) - (4) and (6) - (8) of this subsection. The coating categories excluded from this adopted definition clarifies that the parts and products characterized by other coating categories in the Division 2 or Division 5 rules are not included in the miscellaneous plastic parts and products coating category. The EPA's

2008 CTG did not recommend a definition for this coating category; however, this adopted definition includes the description of the plastic parts and products addressed in the EPA's 2008 CTG.

The definition of *Off-site job shop* in adopted new subparagraph (T) is a non-manufacturer of metal or plastic parts and products that applies coatings to such products at a site exclusively under contract with one or more parties that operate under separate ownership and control. This definition is not an existing definition and is not recommended in the EPA's Miscellaneous Metal and Plastic Parts CTG. The commission adopts this definition to describe the intended meaning of an off-site job shop as described in the Rule Interpretation Team document Number R5-421.005, concerning the applicability of the miscellaneous metal parts and products surface coating rules. The proposed definition may imply that a site, subject to §115.421(a)(9) prior to January 1, 2012, that is considered to be an off-site job shop but also has a designated on-site maintenance shop, would not meet the applicability for the miscellaneous metal parts and products coating rules because the site coats its own products in addition to coating metal parts and products exclusively under contract. This interpretation is not the intent of the rule applicability and in order to avoid confusion in the future, the commission has deleted the word *exclusively* from the adopted definition.

Adopted new subparagraph (V) defines *Pail (metal)* as any cylindrical metal shipping

container with a capacity equal to or greater than 1.0 gallon but less than 12 gallons and constructed of 29 gauge or heavier material. The adopted definition is not recommended in the Miscellaneous Metal and Plastic Parts Coating CTG. Adopted new subparagraph (V) retains the definition of pail in existing §115.420(b)(9)(G) without revision because the coating of pails is still considered a miscellaneous metal part coating operation.

Although there were no comments received directly relating to the addition of a definition for safety-indicating coatings, one commenter requested clarification concerning the types of coatings considered to be safety-indicating coatings. For clarification, the commission adopts new subparagraph (AA), which defines *Safety-indicating coating* as a coating which changes physical characteristics, such as color, to indicate unsafe conditions. This adopted definition is identical to the definition provided in the South Coast Air Quality Management District (SCAQMD) Rule 1107, Coating of Metal Parts and Products, one of the rules the EPA used to develop the 2008 CTG recommendations.

Adopted new paragraph (6) defines the terms that apply to motor vehicle materials. The terms defined in adopted new subparagraphs (A) - (H) include: *Motor vehicle bedliner*; *Motor vehicle cavity wax*; *Motor vehicle deadener*; *Motor vehicle gasket/sealing material*; *Motor vehicle lubricating wax/compound*; *Motor vehicle sealer*; *Motor vehicle trunk interior coating*; and *Motor vehicle underbody coating*. The adopted

definitions of these terms are provided in adopted new paragraph (6) and are not specifically discussed in this preamble. The definitions are taken directly from the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG with changes to replace the term *facility* with *process*. The adopted changes more appropriately reflect that motor vehicle materials applied to substrates other than automobiles or light-duty trucks during assembly line-coating are subject to the requirements corresponding to motor vehicle materials regardless of the process location. Since proposal, the definition for *Motor vehicle sealer* has been revised to correct the reference to *automobile and light-duty truck sealer* that was erroneously included in the EPA's 2008 CTG-recommended definition.

Adopted new paragraph (7) defines *Paper, film, and foil coating* as the coating of paper and pressure-sensitive tapes (regardless of substrate and including paper, fabric, and plastic film), related web coating processes on plastic film (including typewriter ribbons, photographic film, and magnetic tape), metal foil (including decorative, gift wrap, and packaging), industrial and decorative laminates, abrasive products (including fabric coated for use in abrasive products), and flexible packaging. Paper, film, and foil coating includes the application of a continuous layer of a coating material across the entire width or any portion of the width of a paper, film, or foil web substrate to: provide a covering, finish, or functional or protective layer to the substrate; saturate the substrate for lamination; or provide adhesion between two substrates for lamination. Paper, film,

and foil coating does not include coating performed on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press. In addition, size presses and on-machine coaters that function as part of an in-line papermaking system are not included.

Adopted new paragraph (7) incorporates the EPA's 2007 Paper, Film, and Foil CTG process description to supplement the existing definition of paper coating in §115.420(b)(10). The added language is intended to clearly distinguish between processes that constitute paper, film, and foil coating and processes that include coating on paper, film, and foil but that would not constitute a coating process and, therefore, would not be subject to the requirements referring to paper, film, and foil coating. To provide further clarification, paragraph (7) has been reformatted since proposal to separate the processes considered paper, film, and foil coating from those that are not. However, the substance of this definition has not been altered. Additionally, the EPA's 2007 CTG considers fabric coating and vinyl coating a paper, film, and foil coating process; however, the commission interprets the applicability of fabric and vinyl coating under paper, film, and foil coating to be limited to certain fabric and vinyl coating operations. Under this interpretation, some facilities may be subject to paper, film, and foil under Division 5 while others may remain subject to the Division 2 fabric and vinyl coating requirements in Division 2, depending on the particular coating operation.

Adopted new paragraph (8) defines the terms that apply to pleasure craft. Adopted new paragraph (8) defines *Pleasure craft* as any marine or fresh-water vessel used by individuals for noncommercial, nonmilitary, and recreational purposes that is less than 65.6 feet in length. Adopted new paragraph (8) clarifies that a vessel rented exclusively to, or chartered for, individuals for such purposes is considered a pleasure craft. Adopted new paragraph (8) retains the existing definition of pleasure craft in existing §115.420(b)(11)(U) except for the metric system measurement which has been deleted since proposal to ensure units are used consistently throughout the division. This change is not intended to change the meaning of the adopted new *Pleasure craft* definition. In response to comments received on the proposed rule, the commission has revised the definitions for extreme high-gloss coating, pretreatment wash primer, and antifoulant sealer/tie coating to reflect the commenter's suggestions. The definitions adopted in paragraph (8) are taken directly from the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG without substantive change, except where specifically discussed.

The terms defined in adopted new subparagraphs (A) - (K) include: *Antifoulant coating*; *Antifoulant sealer/tie coating; Extreme high-gloss coating*; *Finish primer-surfacer*; *High build primer-surfacer*; *High-gloss coating*; *Pleasure craft coating*; *Pretreatment wash primer*; *Repair Coating; Topcoat;* and *Touch-up coating*.

Adopted new subparagraph (B) defines *Antifoulant sealer/tie coating* as a coating applied over an antifoulant coating to prevent the release of biocides into the environment or to promote adhesion between an antifouling and a primer or other antifoulants. As discussed elsewhere in the Section by Section Discussion portion of this preamble, this definition has been established to accommodate the adopted new VOC limit for antifoulant sealer/tie coating in §115.453(a)(1)(F) in response to comments received on the proposed rulemaking.

Adopted new subparagraph (C) defines *Extreme high-gloss coating* as any coating that achieves at least 90% reflectance on a 60 degree meter when tested by American Society for Testing and Materials Method D523-89. Coatings that achieve at least 90% reflectance, instead of 95% reflectance as proposed, constitute extreme high-gloss coatings. This definition has been modified since proposal in response to comments received on this rulemaking.

Adopted new subparagraph (H) defines *Pretreatment wash primer* as a coating that contains no more than 25% solids by weight and at least 0.01% acids by weight; used to provide surface etching; and applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings. As discussed elsewhere, this definition has been revised in response to comments received. Coatings that, contain no more than 25% solids by weight and at least 0.10% acids by weight instead of 12% solids

by weight and at least 0.50% acids by weight as proposed, constitute pretreatment wash primers.

To accommodate the exemption for pleasure craft repair and touch-up coatings provided in response to comments received on this rulemaking, the rule has been revised to include definitions for repair and touch-up coatings. Adopted new subparagraph (I) defines *Repair coating* as a coating used to re-coat portions of a previously coated product that has sustained mechanical damage to the coating following normal surface coating processes. Adopted new subparagraph (K) defines *Touch-up coating* as a coating used to cover minor coating imperfections appearing after the main coating process. These definitions are consistent with the definitions for repair coatings and touch-up coatings recommended in the EPA's 2008 CTG, and subsequently, the adopted rules for the miscellaneous metal and plastic parts coating categories in §115.450(c)(5)(Z) for repair coating and in §115.450(c)(5)(FF) for touch-up coating. Applying these definitions to the pleasure craft coating category facilitates understanding of the intended exemption in adopted new §115.451(n).

Section 115.451, Exemptions

The commission adopts new §115.451, to list the exemptions that apply to the owner or operator of a surface coating process subject to this division. Adopted new §115.451 provides the same exemptions for the surface coating processes that are currently

located in existing §115.427(a) and incorporates the exemptions recommended in the CTG documents associated with the surface coating processes affected by this division. Adopted new §115.451 has been reformatted from proposal as discussed in this portion of the Section by Section Discussion.

Adopted new subsection (a), proposed as paragraph (1), excludes from the VOC emission calculations for purposes of paragraphs (1) - (3) the coatings and solvents used in coating activities and associated cleaning operations not addressed by the surface coating categories in §115.421(a)(3), (5) - (7), and (10) - (15) or §115.453. Adopted new §115.451(a) includes, as an example, that architectural coatings applied in the field to stationary structures and their appurtenances, to portable buildings, to pavements, or to curbs at a property would not be included in the calculations. The adopted exemption retains the criteria in existing §115.427(a)(3) with non-substantive revision to ensure materials that are currently required to be considered in the calculation continue to be included regardless of whether the coating process is regulated under Division 2 or relocated to Division 5. This is an existing Chapter 115 exemption and not recommended in the EPA's CTG documents. The commission has revised the proposed rule to clarify this subsection applies to paragraphs (1) - (3). Additionally, the commission has corrected the citations referring to the applicable coating categories in §115.421 that are considered when determining the VOC emissions at a property. At proposal, this exemption included the coatings and solvents associated with §115.421(a)(8)(A), which

regulates the automobile and light-duty truck manufacturing coating category that has transitioned to this division and should not be included; and excluded the coatings and solvents associated with §115.421(a)(7), which regulated the can coating category and should be included.

Adopted new paragraph (1), proposed as subparagraph (A), exempts all surface coating processes on a property that, when uncontrolled, will emit a combined weight of VOC of less than 3.0 pounds per hour and 15 pounds per day in any consecutive 24-hour period from the control requirements in §115.453. As discussed elsewhere in this preamble, the CTG documents recommend an exemption threshold of 15 pounds per day for each product coating category. The commission is not adopting the CTG recommendation because the existing exemption criteria in §115.427(a)(3) requires the VOC emissions generated from the coatings and solvents used in all of the surface coating processes in Division 2, unless specifically excluded, be combined to determine exemption from the applicable rule requirements in §115.421(a). Adopted new paragraph (1) maintains the existing approach implemented in §115.427(a)(3)(A), with revisions to indicate this exemption continues to apply to the processes transitioning from applicability in Division 2 to Division 5.

Adopted new paragraph (2), proposed as subparagraph (B), exempts surface coating processes on a property that, when uncontrolled, will emit a combined weight of VOC of

less than 100 pounds in any consecutive 24-hour period from §115.453(a), if documentation is provided to, and approved by, both the executive director and the EPA to demonstrate that necessary coating performance criteria cannot be achieved with coatings that satisfy applicable VOC limits and that control equipment is not technically or economically feasible. Adopted new §115.451(a)(2) is the same as the existing Chapter 115 exemption in §115.427(a)(3)(B) and not an EPA CTG recommendation.

Adopted new paragraph (3), proposed as subparagraph (C), exempts surface coating processes on a property where total coating and solvent usage does not exceed 150 gallons in any consecutive 12-month period from the VOC limits in §115.453(a). The adopted exemption is identical to the current exemption in §115.427(a)(3)(C).

Adopted new subsection (b), proposed as paragraph (2), exempts the surface coating processes in paragraphs (1) - (4), proposed as subparagraphs (A) - (C), from the coating VOC limits for miscellaneous metal and plastic part coating in §115.453(a)(1)(C) - (D) and motor vehicle materials in §115.453(a)(2). Adopted new paragraph (1) exempts large appliance coating. Adopted new paragraph (2) exempts metal furniture coating. Adopted new paragraph (3) exempts automobile and light-duty truck assembly coating. The exemption for the surface coating processes listed in adopted paragraphs (1) - (3) clarifies that any such part or assembled product is not considered a miscellaneous metal or plastic part and would not be required to comply with the rule requirements

related to this category. Since proposal, the coating category specified in paragraph (2) has been incorporated into adopted new §115.451(b) for clarification. In response to comments received, adopted new paragraph (4) has been included to exempt from the miscellaneous metal and plastic parts those surface coating processes specified in §115.420(b)(1) - (8) and (10) - (14). Adopted new paragraph (4) clarifies that the surface coating processes listed remain subject to Division 2 and ensure that they are not affected by the adopted new rules in Division 5. This exemption was inadvertently left out at proposal, but is consistent with the EPA's 2008 Miscellaneous Metal and Plastic Parts CTG recommendations and the existing Division 2 miscellaneous metal parts and products coatings rule intent. Additionally, at proposal, this subsection did not exempt the surface coating processes in paragraphs (1) - (4) from the motor vehicle material requirements. However, the exemption revision is necessary because the motor vehicle material requirements only apply to the substrates under the surface coating processes in §115.453(a)(1)(C) - (F).

Adopted new subsection (c), proposed as paragraph (3), exempts paper, film, and foil surface coating processes from the coating application system requirements in §115.453(c) and the coating use work practice requirements in §115.453(d)(1). The EPA's 2007 Paper, Film, and Foil Coating CTG document does not recommend coating application methods and does not provide recommendations for work practices associated with coatings and coating-related waste.

Adopted new subsection (d), proposed as paragraph (4), exempts automobile and light-duty truck assembly surface coating processes from the coating application system requirements in §115.453(c) and the cleaning-related work practice requirements specified in §115.453(d)(2). The 2008 Automobile and Light-Duty Truck Assembly Coatings CTG document recommends that the owners and operators of automobile and light-duty truck assembly coating processes develop and implement a work plan for cleaning activities beyond the more general work practice procedures listed in §115.453(d)(2). The 2008 CTG document also does not provide the recommendation to require coatings be applied using specific application systems.

Adopted new subsection (e), proposed as paragraph (5), exempts automobile and light-duty truck assembly surface coating materials supplied in containers with a net volume of 16 ounces or less, or a net weight of 1.0 pound or less, from the VOC limits in Table 2 under §115.453(a)(3).

Adopted new subsection (f), proposed as paragraph (6), provides an exemption for specific miscellaneous metal part and product surface coatings and surface coating processes from using the coating application systems required in §115.453(c). The operations exempted under adopted paragraphs (1) - (7), proposed as subparagraphs (A) - (G), include: touch-up coatings, repair coatings, and textured finishes; stencil coatings;

safety-indicating coatings; solid-film lubricants; electric-insulating and thermal-conducting coatings; magnetic data storage disk coatings; and plastic extruded onto metal parts to form a coating. The commission is not adopting the EPA's 2008 Miscellaneous Metal Parts and Products Coatings CTG recommendation to exempt these coatings and coating operations from the coating VOC limits for reasons discussed in the Background and Summary section of this preamble.

Adopted new subsections (g) and (h), proposed as paragraphs (7) and (8), also exempt specific surface coatings and operations from the coating application system requirements in §115.453(c). Adopted new subsection (g), proposed as paragraph (7), exempts all miscellaneous plastic part airbrush coatings and coating operations where total coating usage is less than 5.0 gallons per year. Adopted new subsection (h), proposed as paragraph (8), provides an exemption for pleasure craft surface coating operations applying extreme high-gloss coatings. The adopted exemptions are recommended in the EPA's 2008 Miscellaneous Metal and Plastic Part Coatings CTG document.

Adopted new subsection (i), proposed as paragraph (9), exempts various miscellaneous plastic parts surface coatings and surface coating operations from the coating VOC limits in §115.453(a)(1)(D). The coatings and coating operations exempted under adopted new paragraphs (1) - (8), proposed as subparagraphs (A) - (H), include: touch-

up and repair coatings; stencil coatings applied on clear or transparent substrates; clear or translucent coatings; any individual coating type used in volumes less than 50 gallons in any one year, if substitute compliant coatings are not available, provided that the total usage of all such coatings does not exceed 200 gallons per year, per property; reflective coating applied to highway cones; mask coatings that are less than 0.5 mil thick dried and the area coated is less than 25 square inches; electromagnetic interference/radio frequency interference shielding coatings; and heparin-benzalkonium chloride-containing coatings applied to medical devices, if the total usage of all such coatings does not exceed 100 gallons per year, per property. Since proposal, the name of the surface coating category exempt in adopted new paragraph (7) has been updated to reference the category using the term as it is defined in §115.450. The adopted exemptions are recommended in the EPA's 2008 Miscellaneous Metal and Plastic Part Coatings CTG document. Since proposal, the term *facility* as used in adopted new paragraphs (4) and (8), proposed as subparagraphs (D) and (H), have been replaced with *property* to clarify the requirement and ensure consistent use of terminology.

Adopted new subsection (j), proposed as paragraph (10), exempts certain automotive/transportation and business machine plastic part surface coatings and surface coating operations from the coating VOC limits in §115.453(a). The exemptions in adopted paragraphs (1) - (8), proposed as subparagraphs (A) - (H), include: texture coatings; vacuum-metalizing coatings; gloss reducers; texture topcoats; adhesion prime;

electrostatic preparation coatings; resist coatings; and stencil coatings. These exemptions are adopted as recommended in the Miscellaneous Metal and Plastic Parts Coatings CTG.

Adopted subsection (k), proposed as paragraph (11), provides an exemption for powder coatings applied to metal and plastic parts surface coating processes from the requirements in this division, except as specified in §115.458(b)(5). Powder coatings produce minimal VOC emissions and would likely not exceed the VOC control limits designated for each coating type specified in the metal and plastic parts requirements in §115.453(a)(1)(C) - (F) and (2).

Adopted new subsection (l), proposed as paragraph (12), exempts aerosol coatings (spray paint) from this division. The adopted exemption is identical to existing §115.427(a)(6).

Adopted new subsection (m), proposed as paragraph (13), exempts coatings applied to test panels and coupons as part of research and development, quality control, or performance-testing activities at paint research or manufacturing properties from the requirements in this division. The adopted exemption is a recommendation provided in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG.

In response to comments received on the pleasure craft surface coating rules, adopted new subsection (n) is added to exempt from the VOC limits in §115.453(a)(1)(F) pleasure craft touch-up and repair coatings supplied in containers less than or equal to 1.0 quart, provided that the total usage of all such coatings does not exceed 50 gallons per calendar year per property. Exempting no more than 50 gallons per calendar year equivalent to the volume of coatings exempted under adopted new subsection (i) for miscellaneous plastic parts and products. Although the commenter requested the exemption in metric units, the adopted exemption has been converted to English units consistent with the units used throughout this division. Providing an exemption for touch-up and repair coatings used in small quantities eliminates the need to completely re-coat a pleasure craft and, as a result, reduces overall VOC emissions from pleasure craft surface coating. This exemption for coatings used in small quantities is also consistent with the EPA's recommended exemptions for other coating categories in the EPA's Miscellaneous Metal and Plastic Parts Coating CTG.

Since proposal, the commission has revised the rule to adopt new subsection (o) to exempt pleasure craft surface coating processes from the VOC limits in §115.453(a)(1)(C) and (D). This new exemption clarifies that pleasure craft coating processes are not considered miscellaneous metal or plastic parts and that owners and operators are not required to comply with the corresponding VOC limits of such parts. Adopted subsection (o) does not alter the intent of the proposed rules.

Section 115.453, Control Requirements

The commission adopts new §115.453, to implement EPA's CTG recommendations related to the surface coating categories adopted for regulation in this division, unless specifically discussed.

Adopted new subsection (a) states that the control requirements in this subsection apply to the surface coating processes subject to this division. Except as specified in paragraph (3), the VOC limits are based on the daily weighted average of all coatings, as delivered to the application system. Adopted new §115.453(a) excludes paragraph (3) to clarify that determination of compliance with the certain VOC limits pertaining to automobile and light-duty truck assembly coatings are based on averaging approaches unique to that industrial coating category. The daily weighted average approach is consistent with both the existing method of determining compliance with the VOC emission limits and the averaging period suggested in the CTG documents for the coating categories subject to this division. Adopted new subsection (a) has been revised since proposal to clarify that the daily weighted average is based on the VOC content in the coatings delivered to the application system, and not on the individual coating VOC content of each coating applied.

Adopted new paragraph (1) requires that the coating VOC limits for each of the

categories listed in subparagraphs (A) - (F) must be met by applying low-VOC coatings to meet the specified VOC content limits on a lb VOC/gal coating basis, (minus water and exempt solvent), or by applying coatings and operating a vapor control system to meet the specified VOC emission limits on a pound of VOC per gallon of solids basis. The requirement that applying low-VOC coatings to meet the VOC content limits as delivered to the application system has been deleted to remove redundant language since it is already stated in subsection (a). In response to comments received, the commission has replaced the term *low-VOC coatings* with *coatings* to clarify that the VOC content of coatings used do not have to meet the VOC emission limits in subparagraphs (A) - (F); instead the combination of the VOC from the coatings used and the vapor control system efficiency must reduce the VOC emissions generated to less than or equal to the VOC emission limits in subparagraphs (A) - (F). Additionally, the proposed provision that required owners and operators to not apply coatings in excess of the VOC content limits in this paragraph may seem conflicting with the requirement to determine the VOC content of coatings based on the daily weighted average. For this reason, paragraph (1) has been revised to state that the VOC limits are based on the daily weighted average. This change clarifies that an affected owner or operator is not required to limit the VOC content of every coating applied; rather, the daily weighted average of the VOC content of the coatings applied must meet the appropriate VOC content limits in this paragraph. These changes are intended to clarify and are not intended to alter the meaning of this paragraph. Adopted paragraph (1) has also been

changed to indicate that if a coating meets more than one coating type definition, then the coating with the least stringent VOC limit applies. Although this provision was not incorporated directly in response to comments, the commission received certain comments that suggest these instances are likely to occur and may cause confusion as to which VOC limit applies. This issue was not addressed in the EPA's CTG documents; however, the existing miscellaneous metal parts and products coatings rules provide this option, which is necessary to facilitate compliance with these rules. Lastly, non-substantive changes were made to the proposed language to ensure consistency with other similar requirements in this subchapter.

The commission adopts new subparagraph (A) to establish the VOC limits that apply to large appliance coatings. As discussed elsewhere in this preamble, the EPA submitted comments on the proposed rulemaking stating that in order for the proposed VOC limits to be approved as RACT for the large appliance coating emission source category, the commission must demonstrate that the existing state limits for the large appliance category, which were based on the EPA's original 1977 CTG recommendations, are no longer technologically or economically feasible. In the proposed rule preamble, the commission provided a demonstration that implementing the 2007 CTG-recommended VOC limits would not interfere with attainment of, or reasonable progress towards attainment of, the ozone standard for the HGB and DFW areas. Although the EPA's 2007 CTG did not specifically explain why the lower limits included in the original 1977

Control of Volatile Organic Emissions from Existing Stationary Sources – Volume V: Surface Coating of Large Appliances CTG recommendations were no longer technologically or economically feasible, in the absence of any specific information indicating that the state's existing limits for these source categories are not technologically or economically feasible, the commission is obligated under the FCAA to revise the proposed limits for large appliance coating to only include the 2007 CTG-recommended limits that are at least as stringent as the existing limits. Therefore, the proposed VOC limits that were less stringent than 2.8 lb VOC/gal coating (minus water and exempt solvent), the existing Chapter 115 VOC limit, have been replaced with the EPA's 2007 CTG-recommended VOC limits, where appropriate. Subparagraph (A) contains two tables with the VOC limits for various types of large appliance coatings. Table 1 presents the VOC content limits on a lb VOC/gal coating basis, and Table 2 presents the equivalent VOC emission limits on a pound of VOC per gallon of solids basis. Although not recommended in the 2007 Large Appliance Coatings CTG, adopted subparagraph (A) requires that if a coating does not meet a specific coating type definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.

The commission adopts new subparagraph (B) to establish the VOC limits that apply to metal furniture coatings. As discussed elsewhere in this preamble, the EPA submitted comments on the proposed rulemaking stating that in order for the proposed VOC limits

to be approved as RACT for the metal furniture coating emission source category, the commission must demonstrate that the existing state limits for the metal furniture category, which were based on the EPA's original 1977 CTG recommendations, are no longer technologically or economically feasible, in addition to the commission's demonstration in the proposed rule that implementing the 2007 CTG-recommended VOC limits would not interfere with attainment of, or reasonable progress towards attainment of, the ozone standard for the HGB and DFW areas. Although the EPA's 2007 CTG did not specifically explain why the lower limits included in the original 1977 *Control of Volatile Organic Emissions from Existing Stationary Sources – Volume III: Surface Coating of Metal Furniture* CTG recommendations were no longer technologically or economically feasible, in the absence of any specific information indicating that the state's existing limits for these source categories are not technologically or economically feasible, the commission is obligated under the FCAA to revise the proposed limits for metal furniture coating to only include the 2007 CTG-recommended limits that are at least as stringent as the existing limits. Therefore, the proposed VOC limits that were less stringent than 3.0 lb VOC/gal coating (minus water and exempt solvent), the existing Chapter 115 VOC limit, have been replaced with the EPA's 2007 CTG-recommended VOC limits, where appropriate. Subparagraph (B) contains two tables with the VOC limits for various types of metal furniture coatings. Table 1 in §115.453(a)(1)(B), presents the VOC content limits on a lb VOC/gal coating basis, and Table 2 in §115.453(a)(1)(B), presents the equivalent VOC emission limits on a

pound of VOC per gallon of solids basis. Although not recommended in the 2007 CTG, adopted subparagraph (B) requires that if a coating does not meet a specific coating type definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.

The commission adopted new subparagraph (C) to establish the VOC limits that apply to miscellaneous metal parts and products coatings. As discussed elsewhere in this preamble, the EPA submitted comments on the proposed rulemaking stating that in order for the proposed VOC limits to be approved as RACT for the miscellaneous metal parts and products coating emission source category, the commission must demonstrate that the existing state limits for the miscellaneous metal parts and products category, which were based on the EPA's original 1978 CTG recommendations, are no longer technologically or economically feasible, in addition to the commission's demonstration in the proposed rule that implementing the 2008 CTG-recommended VOC limits would not interfere with attainment of, or reasonable progress towards attainment of, the ozone standard for the HGB and DFW areas. Although the EPA's 2008 CTG did not specifically explain why the lower limits included in the original 1978 *Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VI: Surface Coating of Miscellaneous Metal Parts and Products* CTG recommendations were no longer technologically or economically feasible, in the absence of any specific information indicating that the state's existing limits for these source categories are not

technologically or economically feasible, the commission is obligated under the FCAA to revise the proposed limits for miscellaneous metal parts and products to only include the 2008 CTG-recommended limits that are at least as stringent as the existing limits. Therefore, the proposed VOC limits that were less stringent than the existing Chapter 115 VOC limits, have been replaced with the EPA's 2008 CTG-recommended VOC limits, where appropriate. Subparagraph (C) contains two tables with the VOC limits for various types of miscellaneous metal parts and products coatings. Table 1 in §115.453(a)(1)(C), presents the VOC content limits on a lb VOC/gal coating basis; and Table 2, also located in §115.453(a)(1)(C), presents the equivalent VOC emission limits on a pound of VOC per gallon of solids basis. The EPA's 2008 CTG inadvertently left out the pounds of VOC per gallon of solids limit for repair and touch-up coatings, thus the proposed rule did as well. However, adopted Table 2 has been revised since proposal to include the pounds of VOC per gallon of solids limit. Adopted subparagraph (C) requires that if a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies. This adopted requirement is recommended in the EPA's 2008 CTG.

The commission adopted new subparagraph (D) to establish the VOC limits that apply to miscellaneous plastic parts and products coatings. Adopted new subparagraph (D) requires that if a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating, and the VOC limit for general coating applies.

This adopted requirement is recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG. Subparagraph (D) contains two tables with coating VOC limits for various miscellaneous plastic parts and products. Table 1 in §115.453(a)(1)(D), presents the VOC content limits on a lb VOC/gal coating basis. At proposal, the word *Coating* was inadvertently excluded from the list of coating categories and has been added where appropriate in the table. Table 2, also located in §115.453(a)(1)(D), presents the equivalent VOC emission limits on a pound of VOC per gallon of solids basis.

The commission adopts new subparagraph (E) to establish the VOC limits that apply to automotive/transportation and business machine plastic parts coatings. Adopted subparagraph (E) requires that the VOC limit for red, yellow, and black automotive/transportation coatings, except touch-up and repair coatings, be determined by multiplying the appropriate limit in Table 1 of this subparagraph by 1.15. The EPA's Miscellaneous Metal and Plastic Parts Coatings CTG recommends that for all miscellaneous metal and plastic part coating categories, if a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies. However, the automotive/transportation and business machine plastic parts coatings category does not have a general or other coating category; the requirement therefore does not apply to this particular coating category. Subparagraph (E) contains two tables with coating VOC limits for various

automotive/transportation and business machine plastic parts coatings types. Table 1 in §115.453(a)(1)(E), presents the VOC content limits for automotive/transportation plastic parts coatings on a lb VOC/gal coating basis and a pound of VOC per gallon of solids basis. Table 2, also located in §115.453(a)(1)(E), presents the VOC content limits for business machine plastic parts coatings on a lb VOC/gal coating basis and a pound of VOC per gallon of solids basis.

The commission adopts new subparagraph (F) to establish the VOC limits that apply to pleasure craft coatings. Adopted new subparagraph (F) requires that if a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating and the VOC limit for other pleasure coatings applies. Such a coating would be classified under *all other pleasure craft surface coatings for metal or plastic*. Similarly, if a coating classified as an antifoulant does not meet one of the antifoulant coating category definitions, the *other substrate antifoulant coating* VOC limit would apply. Subparagraph (F) contains two tables with coating VOC limits for various pleasure craft coatings types. Table 1 in §115.453(a)(1)(F) presents the VOC content limits on a lb VOC/gal coating basis, and Table 2, also located in §115.453(a)(1)(F), presents the equivalent VOC emission limits on a pound of VOC per gallon of solids basis. In response to comments received on the proposed rules, the commission has revised the VOC limits for extreme high-gloss coating, finish primer-surfacer coating, other substrate antifoulant coating, and antifoulant sealer/tie coating in

§115.453(a)(1)(F) to reflect the commenter's suggestions. Based on the information presented by the commenter, and in accordance with EPA's guidance on this issue, the commission agrees that some of the pleasure craft coating VOC limits included in the EPA's 2008 CTG recommendations are not technologically feasible at this time, and that the coating VOC limits requested by the commenter are reasonably available considering technological and economic feasibility and therefore constitute RACT for the pleasure craft industry in Texas.

Adopted new paragraph (2) requires that the coating VOC limits applied to the metal and plastic parts in paragraph (1)(C) - (F) of this subsection, as delivered to the application system, must be met using low-VOC coatings. The proposed provision in the rule that required owners and operators to not apply coatings in excess of the VOC content limits in this paragraph may seem conflicting with the direction to determine the VOC content of coatings based on the daily weighted average. For this reason, proposed paragraph (2) has been revised to remove this statement to clarify that an affected owner or operator is not required to limit the VOC content of every coating applied; rather, the daily weighted average of the VOC content of the coatings applied must meet the appropriate VOC content limits in this paragraph. These changes are intended to clarify and are not intended to alter the meaning of this paragraph. The adopted VOC limits for motor vehicle materials are provided only on a lb VOC/gal coating basis because the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG

document expects that these are low-use materials and are often used in areas of operation that would be expensive to control with add-on controls, and therefore would not be controlled with any type of vapor control system, eliminating the need to convert the VOC content limits in lb VOC/gal coating to pounds of VOC per gallon of solids.

Adopted new paragraph (3) requires that the coating VOC limits for automobile and light-duty truck assembly surface coating processes must be met by applying low-VOC coatings, as delivered to the application system. The proposed provision in the rule that required owners and operators to not apply coatings in excess of the VOC limits in this paragraph may seem conflicting with the direction to determine the VOC content of coatings based on the daily weighted average. For this reason, proposed paragraph (2) has been revised to remove this statement to clarify that an affected owner or operator is not required to limit the VOC content of every coating applied; rather, the daily weighted average of the VOC content of the coatings applied must meet the appropriate VOC limits in this paragraph. These changes are intended to clarify and are not intended to alter the meaning of this paragraph. Table 1 in §115.453(a)(3) presents the VOC limits for each automobile and light-duty truck surface coating process. The limits vary depending on the process. The commission adopts to implement the EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG recommendation to base the VOC limits for electrodeposition primer coatings on a monthly weighted average instead of the daily weighted average required in the existing Chapter 115 rules. Compliance with

the VOC limits on a monthly weighted average basis must be determined in accordance with the procedure in §115.455(a)(2)(D). The term *VOC emission limit* has generally been used in reference to the VOC limits provided on a pound of VOC per gallon of solids basis, and the term *VOC content limit* has been used in reference to the VOC limits provided on a lb VOC/gal coating basis. Because the VOC limits associated with automobile and light-duty truck assembly surface coating processes are provided on both gallon of coating and gallon of solids basis, the commission has revised the terminology to *VOC limit* in this adopted new paragraph, where appropriate, for consistency to avoid potential confusion. This change does not alter the meaning of the requirements in this paragraph in any way.

Additionally, the commission adopts as an alternative to the VOC limit of 4.8 lb VOC/gal coating applied for final repair, if a source owner or operator does not compile records sufficient to enable determination of a daily weighted average VOC content, compliance with the final repair VOC limit may be demonstrated each day by meeting a standard of 4.8 lb VOC/gal coating (minus water and exempt solvent) on an occurrence-weighted average basis. Compliance with the VOC limits on an occurrence-weighted average basis must be determined in accordance with the procedure specified in §115.455(a)(2). Table 2 in §115.453(a)(3) presents the VOC limits for miscellaneous materials used during automobile and light-duty truck assembly coating. Compliance with the VOC content limits must be determined in accordance with §115.455(a)(1) or (2)(C), as appropriate.

Adopted new paragraph (4) requires that the coating VOC limits for each paper, film, and foil coating process in §115.453(a)(4) must be met by applying low-VOC coatings to meet the specified VOC content limits on a pound of VOC per pound of coating basis as delivered to the application system or by applying coatings in combination with the operation of a vapor control system to meet the specified VOC emission limits on a pound of VOC per pound of solids basis. Since proposal, the contents of this paragraph have been amended. The non-substantive changes made to the proposed language ensure consistency with other similar requirements in this subchapter. In response to comments received on requirements similar to this paragraph, the content has been revised to replace the term *low-VOC coatings* with *coatings*. The adopted change clarifies that the VOC content of coatings used do not have to meet the VOC emission limits in this paragraph; instead, the combination of the coating VOC content and the vapor control system efficiency must meet the VOC emission limits in this paragraph. In addition, the proposed provision in the rule that required owners and operators to not apply coatings in excess of the VOC content limits in this paragraph may seem conflicting with the direction to determine the VOC content of coatings based on the daily weighted average. For this reason, proposed paragraph (4) has been revised to remove this statement to clarify that an affected owner or operator is not required to limit the VOC content of every coating applied; rather, the daily weighted average of the VOC content of the coatings applied must meet the appropriate VOC content limits in

this paragraph. These changes are intended to clarify and are not intended to alter the meaning of this paragraph. Lastly, *as delivered to the application system* has been incorporated into adopted paragraph (4) because it was inadvertently left out in the proposed rule.

The table in §115.453(a)(4) provides separate VOC limits for pressure sensitive tape and label surface coating and paper, film, and foil surface coating. The table has been revised since proposal to list the pounds of VOC per pound of coating limits first, followed by the pounds of VOC per pound of solids limits.

The commission adopts new paragraph (5) to require an affected owner or operator choosing to comply with the option to apply coatings in combination with the operation of a vapor control system to meet the VOC emission limits in subsection (a)(1) or (4), to use the equation provided. This adopted new control requirement is necessary to demonstrate that the overall control efficiency of the vapor control system, when used in conjunction with coatings, is sufficient to meet the VOC emission limits in §115.453(a)(1) and (4). Adopted new paragraph (5) contains the equation to determine the overall control efficiency of a vapor control system needed in order to meet the appropriate VOC emission limits in §115.453. The equation adopted in new paragraph (5) is the same as the equation in existing §115.423(3)(A). For owners and operators affected by paragraph (1) of this subsection, the variable units should be in pounds of VOC per

gallon of solids, and for owners and operators affected by paragraph (4) of this subsection, the variable units should be in pounds of VOC per pound of solids. Since proposal, adopted new paragraph (5) has been revised to establish consistency in terminology used throughout this section and with other requirements in this subchapter, as well as to update the variable descriptions. Adopted new paragraph (5) also requires control device and capture efficiency testing to be performed in accordance with the testing requirements in §115.455(a)(3) and (4).

Adopted new subsection (b) provides that except for the surface coating process in subsection (a)(2), the owner or operator of a surface coating process may operate a vapor control system capable of achieving a 90% overall control efficiency, as an alternative to subsection (a). This alternative provides owners and operators the operational flexibility to use means of controlling the VOC generated from coatings other than by reducing the VOC content of the coatings applied, especially when the use of high-VOC coatings is necessary or desirable for product quality. The Automobile and Light-Duty Truck Assembly Coatings CTG did not recommend using a vapor control system as an alternative compliance option. However, to maintain the same flexibility provided in Division 2, adopted new subsection (b) provides the owner or operator of an automobile or light-duty truck assembly coating process the option to comply with the 90% overall control efficiency compliance option recommended in the EPA's CTG documents regarding the other coating processes affected by this rulemaking. Adopted

new subsection (b) requires control device and capture efficiency testing be performed in accordance with the testing requirements in §115.455(a)(3) and (4). Additionally, adopted new subsection (b) indicates that if the owner or operator complies with the overall control efficiency option under this subsection, then the owner or operator is exempt from the application system requirements of subsection (c). An owner or operator choosing the control option in this paragraph would not have to limit the VOC content of coating materials and would not need to use any particular coating application system to demonstrate compliance with the control requirements. The language in adopted new subsection (b) also does not include the provision in §115.423(3)(B) that requires the owner or operator to submit design data for each capture system and control device to the executive director for approval. Sites that elect the use of this option and install additional control equipment would be required to meet permitting requirements for the installation and including a separate provision for executive director approval is unnecessary.

The commission adopts new subsection (c) to ensure that the owner or operator of any surface coating process subject to this division does not apply coatings unless one of the listed coating application systems is used. Except for the automobile and light-duty truck assembly surface coating category and the paper, film, and foil surface coating category, the adopted application systems are intended for use in surface coating processes choosing to comply with the control options requiring low-VOC coatings in

subsection (a). If an operation qualifies for exemption from the VOC content limits, the coating application system requirements are still applicable to that operation unless specifically exempt from this subsection or if operating a vapor control system. The application systems are listed in adopted new paragraphs (1) - (7) and include: electrostatic application; high-volume, low-pressure spray (HVLP); flow coat; roller coat; dip coat; brush coating or hand-held paint rollers; and other coating application system capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spray. Adopted new paragraph (7) states that for the purpose of this requirement, the transfer efficiency of HVLP spray is assumed to be 65%. In response to comments received on this rulemaking, the commission has incorporated hand-held paint rollers into paragraph (6) to clarify that this is an acceptable application system. The commission expects that hand-held paint rollers are synonymous with brush coating listed in §115.453(b)(6).

Adopted new subsection (d) requires the owner or operator of a surface coating process subject to the division to implement work practice procedures listed in paragraphs (1) and (2). The adopted new work practices are recommendations provided in the CTG documents addressing the coating categories affected by this division.

Adopted new paragraph (1) requires that for all coating-related activities, including but not limited to, solvent storage, mixing operations, and handling operations for coatings

and coating-related waste materials, the owner or operators of all surface coating processes listed in §115.450(a), except where specifically exempt, must implement the work practices in subparagraphs (A) - (E). Adopted new paragraph (1) also requires additional work practices for automobile and light-duty truck assembly coating. Adopted new subparagraph (A) requires storage of all VOC-containing coatings and coating-related waste in closed containers. Adopted new subparagraph (B) requires minimization of spills of VOC-containing coatings. Adopted new subparagraph (C) requires conveying all coatings in closed containers or pipes. Adopted new subparagraph (D) requires closing mixing vessels that contain VOC-containing coatings and other materials except when specifically in use. Adopted new subparagraph (E) requires cleaning up spills immediately. Although the Large Appliance Coatings CTG is the only document that recommends the work practice specified in subparagraph (E), the commission adopts to extend the requirement to the other surface coating processes subject to this division because the commission expects that most sites are voluntarily following this work practice for safety reasons. Adopted new subparagraph (F) requires that in addition, the owner or operator of an automobile and light-duty truck assembly coating process minimize VOC emissions from the cleaning of storage, mixing, and conveying equipment. Adopted new subparagraph (F) only applies to automobile and light-duty truck assembly coating processes because this work practice is unique to the recommendations in the corresponding CTG document.

Adopted new paragraph (2) requires that for all cleaning-related activities including, but not limited to, waste, storage, mixing, and handling operations for cleaning materials, the owner or operator must implement the work practice procedures in subparagraphs (A) - (E). Adopted new paragraph (2) requires that in addition, the owner or operator of metal parts and products coating processes listed in §115.450(a)(3) - (5), implement the work practice in subparagraph (F). Adopted subparagraph (A) requires storage of all cleaning materials and shop towels in closed containers. Adopted new subparagraph (B) requires that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials. Adopted new subparagraph (C) requires minimization of spills of VOC-containing cleaning materials. Adopted new subparagraph (D) requires conveying VOC-containing cleaning materials from one location to another in closed containers or pipes. Adopted new subparagraph (E) requires minimization of VOC emissions from cleaning of storage, mixing, and conveying equipment. Adopted new subparagraph (F) requires cleaning up spills immediately. In addition, adopted new subparagraph (G) requires the owner or operator to minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent, and all spent solvent is captured in closed containers. Adopted new subparagraph (G) only applies to metal and plastic parts surface coating processes listed in §115.453(a)(1)(C) - (F) and (2), because this work practice is unique to the recommendations in the 2008 Miscellaneous Metal and Plastic Parts Coatings

CTG document. The adopted work practice procedures in this paragraph apply to any cleaning material involved in operations such as the surface preparation of a substrate and post-operation cleaning of equipment and work areas.

Adopted new paragraph (3) directs the owner or operator of an automobile and light-duty truck assembly surface coating process to implement a work practice plan containing procedures to minimize VOC emissions from cleaning activities and purging of coating application equipment. Adopted new paragraph (3) allows properties with a work practice plan already in place to comply with National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements specified in 40 CFR §63.3094 (as amended through April 20, 2006 (71 FR 20464)), to incorporate procedures for minimizing non-hazardous air pollutant VOC emissions to comply with the work practice plan required by this paragraph.

Adopted new subsection (e) specifies that a coating operation that becomes subject to the provisions of §115.453(a) by exceeding the provisions of §115.451 is subject to the provisions in §115.453(a) even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with §115.453(a) and one of the conditions in paragraphs (1) or (2) is met. This is an existing requirement in §115.422 and the commission adopts to include the same requirement in Division 5. Adopted new paragraph (1) specifies that

the project that caused throughput or emission rate to fall below the exemption limits in §115.451 must be authorized by any permit, permit amendment, standard permit, or permit by rule required by Chapters 106 or 116. Adopted new paragraph (1) also requires that if a permit by rule is available for the project, compliance with §115.451 must be maintained for 30 days after the filing of documentation of compliance with that permit by rule. Adopted new paragraph (2) specifies that if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

Section 115.454, Alternate Control Requirements

Adopted new §115.454, provides the owner or operator of a surface coating process subject to this division, 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 if emission reductions are demonstrated to be substantially equivalent. This option is not a recommendation in any of the CTG documents applicable to this division but is adopted for consistency with other Chapter 115 rules.

Adopted new subsection (b) specifies that for any surface coating process or processes at a specific property, the executive director may approve requirements different from

those in §115.453(a)(1)(C) based upon the executive director's determination that such requirements will result in the lowest emission rate that is technologically and economically reasonable. The adopted new subsection specifies that when making such a determination, the executive director shall specify the date or dates by which such different requirements shall be met and shall specify any requirements to be met in the interim. The adopted new subsection also specifies that if the emissions resulting from such different requirements equal or exceed 25 tpy for a property, the determinations for that property shall be reviewed every five years. Additionally, the adopted new subsection states that executive director approval does not necessarily constitute satisfaction of all federal requirements nor eliminate the need for approval by the EPA in cases where specified criteria for determining equivalency have not been clearly identified in applicable sections of this chapter. Adopted new subsection (b) incorporates the alternate control requirement in existing §115.423(4), with non-substantive changes to update the section referenced in order to maintain the same flexibility afforded in the existing Chapter 115 rules. Since proposal, this paragraph has been modified to correctly cite §115.453(a)(1)(C), which contains miscellaneous metal parts and products because this subsection only applies to this coating category. In addition, the phrase *or processes* has been removed to clarify that the only coating process affected by this subsection is the miscellaneous metal parts and products coating category.

Section 115.455, Approved Test Methods and Testing Requirements

Adopted new §115.455, specifies the test methods approved to determine compliance with the coating VOC limits and specifies the capture efficiency testing requirements for owners and operators choosing to operate a vapor control system to comply with the adopted rule requirements.

Adopted new subsection (a) specifies the approved test methods and testing requirements and requires that compliance with the requirements in this division must be determined by applying the test methods, as appropriate. Additionally, adopted new subsection (a) provides as an alternative to the test methods in paragraph (1), the VOC content of coatings may be determined by using analytical data from the MSDS, and if necessary the dilution solvent. The Miscellaneous Metal and Plastic Parts Coatings and Automobile and Light-Duty Truck Assembly Coatings CTG documents recommend accepting data from the MSDS as a compliance alternative to testing. However, the commission expects that relying on the MSDS is sufficient to ensure continuous compliance with the control requirements in §115.453 and adopts to extend this option to owners and operators of all surface coating categories. Unless specifically discussed, the adopted test methods in this subsection are identical to the testing procedures required in existing §115.425.

Adopted new paragraph (1) specifies that the owner or operator shall demonstrate compliance with the VOC limits in §115.453 by applying the test methods in paragraphs (1) and (2), as appropriate. The EPA's Miscellaneous Metal and Plastic Parts Coatings and Automobile and Light-Duty Truck Assembly Coatings CTG documents provide specific testing recommendations that are adopted for inclusion in this section. The commission adopts to allow owners and operators of these surface coating processes to employ other test methods to avoid inadvertently eliminating a testing procedure in §115.425 that may currently be used to comply with the existing requirements in §115.421(a). Adopted new paragraph (1) also allows the owner or operator to exclude exempt solvents from determining compliance with the applicable control requirements when a test method inadvertently measures compounds that are exempt solvent. This provision is currently in §115.425 and is retained in the adopted rules, with revision, because compliance with the VOC content limits is based on the VOC concentration of a coating considering only the VOC and solids content.

The specific methods and procedures required are listed in subparagraphs (A) - (D) and include: Method 24 (40 CFR Part 60, Appendix A); American Society for Testing and Materials (ASTM) Test Methods D1186-06.01, D1200-06.01, D3794-06.01, D1644-75, and D 3960-81; EPA guidelines series document "Procedures for Certifying Quantity of Volatile Organic Compounds (VOC) Emitted by Paint, Ink, and Other Coatings," EPA-

450/3-84-019, as in effect December, 1984; and the additional test procedures described in 40 CFR §60.446 (as amended through October 17, 2000 (65 FR 61761)).

The commission also adopts new subparagraph (E) to allow minor modifications to the test methods specified in subparagraphs (A) - (D) if approved by the executive director.

The commission adopts new paragraph (2) to indicate that in addition to the test methods listed in subsection (a)(1), the owner or operator shall determine compliance with the VOC limits in §115.453(a)(3) by applying the test methods in paragraphs (2)(A) - (C), as appropriate.

Adopted new subparagraph (A) specifies the Protocol for Determining the Daily VOC Emission Rate of Automobile and Light-Duty Truck Topcoat Operations (EPA-453/R-08-002).

Adopted new subparagraph (B) specifies the procedure contained in this paragraph for determining daily compliance with the alternative emission limitation in §115.453(a)(3) for final repair. Calculation of occurrence weighted average for each combination of repair coatings (primer, specific basecoat, clearcoat) must be determined by the procedure list in subparagraph (B)(i) - (iii).

Adopted new clause (i) provides that the relative occurrence weighted average usage is calculated using the equations in clause (i) for each repair material. Adopted new clause (i) is the combination of the requirements in existing §115.425(3)(B)(i) and (ii). The equations in §115.453(a)(2)(B)(i) are used to determine the occurrence weighted average of the primer, basecoat, and clearcoat used in repair operations. A description of each equation variable is provided with the equations. The EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG recommends giving clearcoat coatings a weighting factor of two and the other coatings a weighting factor of one. However, the commission adopts to retain the existing approach for determining the occurrence weighted average in §115.425(3)(B) because it adequately accounts for the varying usage between the different types of coatings used in repair operations.

Adopted new clause (ii) specifies that the occurrence weighted average (Q) in lb VOC/gal coating (minus water and exempt solvents) as applied, for each potential combination of repair coatings is calculated according to subparagraph (B). Included in adopted new clause (ii) is the equation to determine the occurrence weighted average and descriptions of each equation variable, except for those that are defined in clause (i).

Adopted new subparagraph (C) lists the procedure contained in 40 CFR Part 63, Subpart PPPP, Appendix A (as amended through April 24, 2007 (72 FR 20237)), for

reactive adhesives. Adopted new subparagraph (C) is a recommendation provided in the EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG document.

Adopted new subparagraph (D) lists the procedure contained in 40 CFR Part 60, Subpart MM (as amended October 17, 2000 (65 FR 61760)) for determining the monthly weighted average for electrodeposition primer.

Adopted new paragraph (3) lists the required methods used to determine compliance with the overall control efficiency option in adopted new §115.453(b). The methods listed in adopted new subparagraph (3) are used to determine the destruction or removal efficiency of control devices, such as a thermal oxidizer, that are used to comply with §115.453(b). The methods listed in subparagraphs (A) - (D) include: Methods 1 - 4 (40 CFR Part 60, Appendix A) for determining flow rate; Method 25 (40 CFR Part 60, Appendix A) for determining total gaseous nonmethane organic emissions as carbon; Methods 25A or 25B (40 CFR Part 60, Appendix A) for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis; and the additional performance test procedures in 40 CFR §60.444 (as amended through October 17, 2000 (65 FR 61761)). Adopted new subparagraph (E) allows the executive director to approve minor modifications to the methods in subparagraphs (A) - (D).

Adopted new paragraph (4) requires that the owner or operator of a surface coating process subject to §115.453(a)(5) and (b) shall measure the capture efficiency using applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; and Procedure F.2 - Fugitive VOC Emissions from Building Enclosures. Since proposal, the rule citation that incorrectly referred to the surface coating processes subject to this requirement, has been updated to correctly cite §115.453(a)(5) and (b).

Adopted new subparagraph (A) includes exemptions that apply to capture efficiency testing requirements if the source meets the provisions in either clause (i) or (ii). The exemptions from capture efficiency testing provided in clauses (i) and (ii) are identical to the capture efficiency testing exemptions currently provided in existing §115.425(a)(7)(A). Adopted new clause (i) provides an exemption for sources with a permanent total enclosure that meets the specifications of Procedure T, and all VOC is directed to a control device. Adopted new clause (ii) provides an exemption if the source uses a control device designed to collect and recover VOC, and the conditions in subclauses (I) and (II) are met.

Adopted new subparagraph (B) requires that the capture efficiency must be calculated using one of the following four protocols referenced. The adopted subparagraph requires, in addition, that any affected source must use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the EPA. The capture efficiency testing protocols included in adopted new subparagraph (B) are the same as those currently required in §115.425(a)(7)(B) except for non-substantive revisions and equation formatting necessary to conform to current rule formatting standards.

Adopted new clause (i) lists the protocol for the gas/gas method using a TTE. Additionally, the adopted clause states that the EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The equation required for the gas/gas method using a TTE is also provided in clause (i) along with the description of the equation variables.

Adopted new clause (ii) lists the protocol for the liquid/gas method using a TTE. Additionally, the adopted clause states that the EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The equation required for the liquid/gas method using a TTE is also provided in clause (ii) along with the description of the equation variables.

Adopted new clause (iii) lists the protocol for the gas/gas method using the building or room enclosure in which the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The adopted clause requires that all fans and blowers in the building or room enclosure in which the affected source is located must be operating as they would under normal production. The equation required for the gas/gas method for using a building or room enclosure in which the affected source is located is also provided in clause (iii) along with the description of the equation variables.

Adopted new clause (iv) lists the protocol for the liquid/gas method using a building or room enclosure where the affected source is located in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The adopted clause requires that all fans and blowers in the building or room enclosure where the affected source is located must be operated as they would under normal production. The equation required for the liquid/gas method for using a building or room enclosure where the affected source is located is also provided in clause (iv) along with the description of the equation variables.

Adopted new subparagraph (C) requires the operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.458(a) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. Adopted new subparagraph (C) indicates the executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test. Adopted new subparagraph (C) ensures the operational parameters tested in the initial performance test are representative of those during normal operation.

Adopted new paragraph (5) allows the owner or operator to use test methods other than those specified in paragraphs (1) - (4) if approved by the executive director and validated by 40 CFR Part 63, Appendix A, Method 301. Adopted new paragraph (5) also specifies that for purposes of this paragraph, substitute "executive director" each place that Method 301 references "administrator."

Adopted new subsection (b) specifies the inspection requirements. Adopted new subsection (b) requires that the owner or operator of each surface coating process subject to the control requirements in §115.453 shall provide samples, without charge, upon request by authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction. Adopted new subsection (b) specifies the representative or inspector requesting the sample will determine the amount of coating

needed to test the sample to determine compliance. These inspection requirements are identical to those in existing §115.424 with reformatting changes.

Section 115.458, Monitoring and Recordkeeping Requirements

The commission adopts new §115.458, which specifies the monitoring and recordkeeping sufficient to demonstrate compliance with this division.

Adopted new subsection (a) specifies that the monitoring requirements in this subsection apply to the owner or operator of a surface coating process subject to this division that uses a vapor control system in accordance with §115.453. Adopted new subsection (a) requires that the owner or operator install and maintain monitors to accurately measure and record operational parameters of all required control devices, as necessary, to ensure the proper functioning of those devices in accordance with design specifications, including the requirements in subsection (a)(1) - (4). The adopted monitoring requirements in subsection (a) are identical to the existing requirements imposed in §115.426(2) with revisions to update language for consistency with language used throughout this division and other Chapter 115 rules.

Adopted new paragraph (1) requires continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed. Adopted new

paragraph (2) requires the total amount of VOC recovered by carbon adsorption or other solvent recovery systems during a calendar month. Adopted new paragraph (3) requires continuous monitoring of carbon adsorption bed exhaust. Adopted new paragraph (4) requires appropriate operating parameters for capture systems and control devices other than those specified in subsection (a)(1) - (3).

Adopted new subsection (b) specifies that the recordkeeping requirements in this subsection apply to the owner or operator of a surface coating process subject to this division. Adopted new paragraph (1) requires the owner or operator to maintain records of the testing data or the MSDS, in accordance with the requirements in §115.455(a)(1). Adopted new paragraph (1) also requires that the MSDS must contain relevant information regarding each coating and solvent available for use in the affected surface coating processes including the VOC content, composition, solids content, and solvent density. Additionally, the adopted new paragraph requires that all records must be sufficient to demonstrate continuous compliance with the VOC limits in §115.453(a).

Adopted new paragraph (2) requires that records be maintained of the quantity and type of each coating and solvent consumed during the specified averaging period if any of the coatings, as delivered to the coating application system, exceed the applicable control limits. Such records must be sufficient to calculate the applicable weighted average of

VOC content for all coatings. Adopted new paragraph (2) is the same as the existing requirement in §115.426(1)(B).

Adopted new paragraph (3) provides as an alternative to the recordkeeping requirements of paragraph (2), the owner or operator that qualifies for exemption under §115.451(a)(3) may maintain records of the total gallons of coating and solvent used in each month and total gallons of coating and solvent used in the previous 12 months. Adopted new paragraph (3) imposes the same requirement as in existing §115.426(1)(B)(3).

Adopted new paragraph (4) requires the owner or operator to maintain, on file, the capture efficiency protocol submitted under §115.455(a)(4). All results of the test methods and capture efficiency protocols must be submitted to the executive director within 60 days of the actual test date. The owner or operator is also required to maintain records of the capture efficiency operating parameter values on-site for a minimum of one year. If any changes are made to capture or control equipment, the owner or operator is required to notify the executive director in writing within 30 days of these changes and a new capture efficiency or control device destruction or removal efficiency test may be required.

Adopted new paragraph (5) requires that the owner or operator claiming an exemption in §115.451 maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria. For example, maintaining records of all coating and solvent usage may be sufficient to demonstrate continuous compliance with the exemption in §115.451. Adopted new paragraph (6) indicates that except for specialty coatings, compliance with the recordkeeping requirements of 40 CFR §63.752, (as amended through September 1, 1998 (63 FR 46534)), is considered to represent compliance with the requirements of this section.

The commission is not adopting proposed paragraph (6) indicating that except for specialty coatings, compliance with the recordkeeping requirements of 40 CFR §63.752, (as amended through September 1, 1998 (63 FR 46534)), is considered to represent compliance with the requirements of this section. Proposed paragraph (6) was inadvertently included at proposal because this provision is included in the corresponding Chapter 115, Subchapter E, Division 2 rules. The commission is not adopting this provision because it is intended to apply to aerospace coating operations that are not specifically addressed in this rule.

Adopted new paragraph (6), proposed as paragraph (7), requires that records must be maintained of any testing conducted in accordance with the provisions specified in §115.455(a). Adopted new paragraph (7), proposed as paragraph (8), requires that

records must be maintained a minimum of two years and be made available upon request to authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction.

Section 115.459, Compliance Schedules

The commission adopts new §115.459, to list the compliance schedule for affected surface coating processes in the DFW and HGB areas subject to Division 5. Adopted new subsection (a) requires that the owner or operator of a surface coating process subject to this division comply with the requirements of this division no later than March 1, 2013. The March 1, 2013, compliance date provides affected owners and operators approximately a year and a half to make any necessary changes and ensures that any VOC reductions achieved by the adopted rule will occur prior to the ozone season in the DFW area.

Adopted new subsection (b) requires that the owner or operator of a surface coating process that becomes subject to this division on or after March 1, 2013, comply with the requirements in this division no later than 60 days after becoming subject. Since proposal, minor changes have been made to explicitly state the compliance date and to replace *each surface coating process* with *a surface coating process* for clarification.

SUBCHAPTER E, SOLVENT-USING PROCESSES

DIVISION 6, INDUSTRIAL CLEANING SOLVENTS

Section 115.460, Applicability and Definitions

The commission adopts new §115.460, to identify the operations affected by the adopted rule requirements and to define the terms relevant to those affected operations.

The commission adopts new subsection (a) to indicate the requirements in this division apply to the owner or operator of solvent cleaning operations in the DFW and HGB areas beginning March 1, 2013. Adopted new subsection (a) states that residential and janitorial cleaning are not considered solvent cleaning operations. The adopted rules exclude residential and janitorial cleaning because these operations are outside the scope of sources intended to be affected by the EPA's 2006 CTG. In response to comments, subsection (a) has been revised to clarify that janitorial cleaning operations, like residential cleaning, are not subject to any requirement in this division. The exclusion of janitorial cleaning was inadvertently omitted at proposal. Unless specifically exempt in §115.461, the adopted cleaning rule requirements in this division are intended to apply to sites where cleaning requirements in the Chapter 115 rules specific to a regulated process or operation are absent, and to industrial processes or operations that are not specifically regulated in Chapter 115.

Adopted new subsection (b) indicates that unless the context clearly indicates otherwise

or unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10, the terms used in this division have the meanings commonly used in the field of air pollution control. Adopted new subsection (b) also lists the specific definitions that apply in adopted new Division 6. Unless specifically discussed, the terms defined in this subsection are based on those in the Bay Area Air Quality Management District (BAAQMD) Regulation 8 Rules and SCAQMD Regulation XI, Rule 1171. The EPA's 2006 Industrial Cleaning Solvents CTG did not recommend any definitions but relied on both Management District's rules for the development of its exemption and control recommendations.

The terms defined in adopted new paragraphs (1) - (11) include: *Aerosol can*; *Electrical and electronic components*; *Janitorial cleaning*; *Magnet wire*; *Magnet wire coating operation*; *Medical device*; *Medical device and pharmaceutical preparation operations*; *Polyester resin operation*; *Precision optics*; *Solvent cleaning operation*; and *Volatile organic compound (VOC) composite partial pressure*.

Adopted new paragraph (3) defines *Janitorial cleaning* as the cleaning of building or building components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, bathrooms, furnishings, and exterior surfaces of office equipment, and excludes the cleaning of work areas where manufacturing or repair activity is performed. The adopted definition is derived from the SCAQMD Regulation XI, Rule 1171 janitorial

cleaning definition with revision to replace the term *facility* with *building* for clarification. The EPA's 2006 Industrial Cleaning Solvents CTG recommends excluding janitorial cleaning from the applicability for the adopted rule requirements.

The definition of *Solvent cleaning operation* in adopted new paragraph (10) is the removal of uncured adhesives, inks, and coatings; and contaminants such as dirt, soil, oil, and grease from parts, products, tools, machinery, equipment, vessels, floors, walls, and other work production related work areas. The adopted definition is based on the EPA's 2006 CTG description of cleaning operations.

At proposal, the commission inadvertently omitted the definition and equation for VOC composite partial vapor pressure. Adopted new paragraph (11) defines *VOC composite partial pressure* as the sum of the partial pressures of the compounds that meet the definition of VOC in §101.1. Adopted new paragraph (11) establishes the formula, and includes descriptions of each equation variable necessary to calculate the VOC composite partial pressure based on the individual vapor pressures of each VOC component in a cleaning solution. Both the definition and equation in adopted new paragraph (11) are derived from the definition in Chapter 115, Subchapter E, Division 4.

Section 115.461, Exemptions

The commission adopts new §115.461, to list the exemptions recommended in the EPA's

2006 Industrial Cleaning Solvents CTG. Adopted new §115.461 establishes consistency with other Chapter 115 rules and makes the rule easier to read by clearly identifying the cleaning activities that are exempt from all or portions of the subsequent rule requirements.

Adopted new subsection (a) exempts the owner or operator of solvent cleaning operations located on a property that emits less than 3.0 tons per calendar year of VOC from all cleaning solvents, when uncontrolled, from the requirements in this division, except as specified in §115.468(b)(2). The commission agrees with the EPA's determination that requiring these small sources to comply with the control requirements in §115.463 is not economically feasible and does not constitute RACT. When determining if a source qualifies for this exemption or any other exemption that refers to uncontrolled VOC emissions, the combined VOC emissions would be calculated without considering the emission reductions achieved through the use of any add-on controls or other operational changes.

In order to facilitate compliance with these rules, additional language has been incorporated into adopted new subsection (a) to exclude from the VOC emissions calculation, solvents used for cleaning operations that are exempt from all or portions of the rule requirements. At proposal, there was no description of the VOC emissions required to be included in the calculation to determine whether the 3.0 tpy threshold is

met or exceeded. Therefore, adopted new subsection (a) clarifies that the solvents used in the cleaning activities qualifying for exemption under subsections (b) - (e) are not included in this calculation because complying with the rule requirements are either technologically infeasible for these activities or the activities are already controlled under another division in Chapter 115.

Adopted new subsection (b) exempts any process or operation subject to Chapter 115 where the division specifies solvent cleaning requirements related to that process or operation. Adopted new subsection (b) ensures that owners and operators of affected processes or operations regulated in Chapter 115 are only subject to one set of cleaning requirements. Examples of operations exempt under adopted new subsection (b) from all requirements in this division because other divisions in Chapter 115 regulate the cleaning activities associated with the operations include degreasing, offset lithographic printing, and miscellaneous metal and plastic parts surface coating processes. Owners and operators qualifying for this exemption should maintain documentation that cleaning related to the process or operation is regulated by a separate rule in Chapter 115. For example, a copy of the rule the process or operation is regulated under would be sufficient to demonstrate compliance with this exemption.

In response to comments on the proposed Division 6 industrial cleaning solvents rules, the commission is adopting new subsection (c) to exempt from this division a solvent

cleaning operation if the conditions in adopted new paragraphs (1) and (2) are satisfied. Adopted new paragraph (1) requires the process that the solvent cleaning operation is associated with be subject to another division in this chapter. Adopted new paragraph (2) requires the VOC emissions from the solvent cleaning operation are controlled in accordance with an emission specification or control requirement of the division that the process is subject to. The commission acknowledges that not all Chapter 115 rules contain cleaning solvent requirements, but that owners and operators of some processes may consider the cleaning operations an integral step of the production process or may find it to be more efficient to control emissions from cleaning activities in accordance with the process control requirements or emissions specifications in other Chapter 115-process specific rules. Adopted new subsection (c) is intended to promote flexibility and reduce the compliance burden for affected sources. The commission expects that complying with requirements in other Chapter 115 rules is at least as effective as meeting the industrial cleaning solvents rule requirements. This exemption is consistent with the EPA's 2006 CTG recommendation to ensure that a particular cleaning activity is not subject to duplicative requirements.

Adopted new subsection (d) exempts the products and operations listed in paragraphs (1) - (17) from the VOC limits in §115.463(a). The EPA's 2006 Industrial Cleaning Solvents CTG relies on the BAAQMD Regulation 8, Rule 4, Sections 8-4-116 and 8-4-117 for its recommended exemptions. The products and operations exempt under these

sections would not be subject to the 0.42 pound VOC per gallon of solution (lb VOC/gal solution) VOC content limit even if subject to BAAQMD Rule 4 through an exemption in another BAAQMD rule under Regulation 8. Under the commission's interpretation of the exemptions provided in the BAAQMD Regulation 8, Rule 4, it is presumed that there are technological feasibility issues with meeting the 0.42 lb VOC/gal solution limit or equivalent cleaning standards and therefore the content limit should not be applied to the products and operations specified in BAAQMD Regulation 8, Rule 4, Sections 8-4-116 and 8-4-117.

The products and operations exempted under adopted new paragraphs (1) - (17) include: electrical and electronic components; precision optics; numisimatic dies; resin mixing, molding, and application equipment; coating, ink, and adhesive mixing, molding, and application equipment; stripping of cured inks, cured adhesives, and cured coatings; research and development laboratories; medical device or pharmaceutical preparation operations; performance or quality assurance testing of coatings, inks, or adhesives; architectural coating manufacturing and application operations; magnet wire coating operations; semiconductor wafer fabrication; coating, ink, resin, and adhesive manufacturing; polyester resin operations; flexographic and rotogravure printing processes; screen printing operations; and digital printing operations.

As a result of comments received on the proposed rules, adopted new paragraph (13) has

been modified to exempt resin manufacturing in addition to ink, coating, and adhesive manufacturing, from the VOC limits due to the technological feasibility issues associated with those limits. The proposed rules exempted ink, adhesive, and coating manufacturing and the commission expects that the same cleaning challenges associated with manufacturing these materials also exist for resin manufacturing. The commission presumes the EPA recommended excluding ink, adhesive, and coating manufacturing from the industrial cleaning solvents rule applicability because the general VOC limits for cleaning solutions prevents adequate cleaning, potentially leading to cross contamination of manufactured products and poor product quality resulting in an off-specification product that would need to be disposed of. Exempting resin manufacturing maintains consistency with the EPA's 2006 CTG guidance that the general recommendations may not apply to a particular situation based upon the circumstances of a specific source.

The commission adopts new subsection (e) to exempt cleaning solvents supplied in aerosol cans from the VOC limits in §115.463(c) if total use for the property is less than 160 fluid ounces per day. Adopted new subsection (e) incorporates the exemption in the SCAQMD Regulation XI, Rule 1171, Section (g)(4). The exemption will allow sites to use higher VOC content cleaning solvents in aerosol cans in limited quantities if necessary for situations where low-VOC cleaning solvents may not be as effective.

Section 115.463, Control Requirements

The commission adopts new §115.463, to implement the EPA's 2006 Industrial Cleaning Solvents recommendations for affected cleaning solvent operations in the DFW and HGB areas that the commission has determined to be RACT, unless specifically discussed in this preamble. Adopted new §115.463 has been reformatted from proposal as discussed in this portion of the Section by Section Discussion.

Adopted new subsection (a), proposed as paragraph (1), requires that the owner or operator shall limit the VOC content of cleaning solutions to either the limit in paragraph (1) or (2). Various compliance options are provided to give affected owners or operators the flexibility to choose the appropriate option for the solvent cleaning operations performed at the site. Adopted new paragraph (1), proposed as subparagraph (A), limits the VOC content to 0.42 lb VOC/gal solution, as applied. Adopted new paragraph (2), proposed as subparagraph (B), limits the composite partial vapor pressure of the cleaning solution to 8.0 millimeters of mercury at 20 degrees Celsius (68 degrees Fahrenheit). Since proposal, the units in adopted new paragraph (2) have been revised to ensure units are used consistently throughout the Chapter 115 rules. The adopted change in non-substantive and is not intended to change the meaning of this requirement.

Adopted new subsection (b), proposed as paragraph (2), provides an alternative to

subsection (a) by allowing the owner or operator to operate a vapor control system capable of achieving an overall control efficiency of at least 85% by mass. Adopted new subsection (b) requires that capture efficiency testing must be performed in accordance with the testing requirements in §115.465. The 85% overall control efficiency is the control level recommended by the CTG as an alternative to meeting the VOC content limits.

Adopted new subsection (c), proposed as paragraph (3), specifies the work practice procedures the owner or operator shall implement during the handling, storage, and disposal of cleaning solvents and shop towels. Adopted new paragraph (1), proposed as subparagraph (A), requires covering open containers and used applicators. Adopted new paragraph (2), proposed as subparagraph (B), requires minimizing air circulation around solvent cleaning operations. Adopted new paragraph (3), proposed as subparagraph (C), requires properly disposing of used solvent and shop towels. Adopted new paragraph (4), proposed as subparagraph (D), requires implementing equipment practices that minimize VOC emissions (e.g., maintaining cleaning equipment to repair solvent leaks).

Adopted new subsection (d), proposed as paragraph (4), specifies that a solvent cleaning operation that becomes subject to the provisions of subsection (a) by exceeding the exemption limits in §115.461 is subject to the provisions in subsection (a) even if

throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with subsection (a) and one of the conditions in paragraphs (1) or (2) is met. The provision in adopted new subsection (d) is similar to the existing provision in §115.422(6), and the commission is adopting this requirement in the control requirements of the adopted new rule for industrial cleaning solvents. Adopted new paragraph (1), proposed as subparagraph (A), requires the project that caused throughput or emission rate to fall below the exemption limits in §115.461 to be authorized by any permit, permit amendment, standard permit, or permit by rule required by Chapters 106 or 116. If a permit by rule is available for the project, compliance with subsection (a) must be maintained for 30 days after the filing of documentation of compliance with that permit by rule. Adopted new paragraph (2), proposed as subparagraph (B), requires that if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

Section 115.464, Alternate Control Requirements

Adopted new §115.464, indicates that for the owner or operator of a solvent cleaning operation subject to this division, alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division that may be approved by the executive director in accordance with

§115.910 if emission reductions are demonstrated to be substantially equivalent. This option is not a recommendation in the EPA's 2006 Industrial Cleaning Solvents CTG but is consistent with the flexibility afforded to owners and operators regulated under other Chapter 115 rules.

Section 115.465, Approved Test Methods and Testing Requirements

Adopted new §115.465, specifies the methods and testing requirements that the owner or operator shall use to demonstrate compliance with the control requirements in §115.463. The proposed rule allowed the owner or operator to exclude exempt solvents when determining compliance with the VOC content limit, when a test method inadvertently measured compounds that are exempt. However, this option was erroneously included in the proposed rule and has been removed in the adopted rule because the control requirements include all components of the cleaning solution when determining the VOC content.

Since proposal, adopted new paragraph (1) has been reformatted to accommodate additional test methods to demonstrate compliance with the VOC limits in §115.463(a). Adopted paragraph (1) requires compliance to be determined using one of the methods listed in adopted new subparagraphs (A) - (D). Adopted new subparagraph (A) lists Method 24 (40 CFR Part 60, Appendix A). Adopted new subparagraph (B) lists American Society for Testing and Materials Method D2879, Standard Test Method for

Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope to demonstrate compliance with §115.463(a)(2). Adopted new subparagraph (C) lists using standard reference texts for the true vapor pressure of each VOC component to demonstrate compliance with §115.463(a)(2). Adopted new subparagraph (D) lists using analytical data from the cleaning solvent supplier or manufacturer's MSDS. Adopted new subparagraph (D) can be used as an alternative to the methods listed in adopted new subparagraphs (A) and (B), and in lieu of adopted subparagraph (C). Although the EPA's 2006 CTG does not recommend specific test methods to determine the VOC content or vapor pressure of cleaning solutions, the commission adopts to include the various procedures to provide owners and operators the opportunity to choose the most appropriate means to demonstrate compliance with the control requirements in §115.463(a), as an alternative to relying on the MSDS or in the cases where the MSDS information is not available. This same flexibility is afforded to sites affected by other Chapter 115 rules.

Adopted new paragraph (2) requires that the owner or operator subject to §115.463(b) measure the capture efficiency using applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary

Enclosures; and Procedure F.2 - Fugitive VOC Emissions from Building Enclosures. These testing requirements are the same as those imposed specified in existing §115.425(4).

Adopted new subparagraph (A) provides two exemptions in clauses (i) and (ii) that may apply to capture efficiency testing requirements. The exemptions from capture efficiency testing provided in clauses (i) and (ii) are identical to the capture efficiency testing exemptions currently provided in the existing §115.425(a)(7)(A) and adopted to be included in adopted new §115.455. Adopted new clause (i) provides an exemption for sources with permanent total enclosure that meets the specifications of Procedure T, and all VOC is directed to a control device. Adopted new clause (ii) provides an exemption if the source uses a control device designed to collect and recover VOC and the conditions in subclauses (I) and (II) are met.

Adopted new subparagraph (B) requires that the capture efficiency must be calculated using one of the four protocols referenced in clauses (i) - (iv). The adopted subparagraph additionally requires that any affected source must use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the EPA. The capture efficiency testing protocols included in adopted new subparagraph (B) are the same as those currently required in §115.425(4)(B) in the current Chapter 115 rules for

surface coating process, except for non-substantive revisions and formatting to the equations to conform to current rule formatting standards.

Adopted new clause (i) lists the protocol for the gas/gas method using a TTE. Additionally, the adopted clause states that the EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The equation required for the gas/gas method using a TTE is also provided in clause (i) along with the description of the equation variables.

Adopted new clause (ii) lists the protocol for the liquid/gas method using TTE. Additionally, the adopted clause states that the EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The equation required for the liquid/gas method using a TTE is also provided in clause (ii) along with the description of the equation variables.

Adopted new clause (iii) lists the protocol for the gas/gas method using the building or room enclosure where the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The adopted clause requires that all fans and blowers in the building or room enclosure where the affected source is located must be operating as they would under normal production.

The equation required for the gas/gas method using a building or room enclosure where the affected source is located is also provided in clause (iii) along with the description of the equation variables.

Adopted new clause (iv) lists the protocol for the liquid/gas method using a building or room enclosure where the affected source is located in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The adopted clause requires that all fans and blowers in the building or room enclosure where the affected source is located must be operated as they would under normal production. The equation required for the liquid/gas method using a building or room enclosure where the affected source is located is also provided in clause (iv) along with the description of the equation variables.

Adopted new subparagraph (C) requires the operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.468(a) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. Adopted new subparagraph (C) indicates the executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test.

Adopted new subparagraph (C) ensures the operational parameters tested in the initial performance test are representative of those during normal operation.

Adopted new paragraph (3) lists the required methods used to determine compliance with the overall control efficiency option in adopted new §115.463(b). The methods listed in adopted new paragraph (3) are used to determine the destruction or removal efficiency of control devices, such as a thermal oxidizer, that are used to comply with §115.463(b). The methods listed in subparagraphs (A) - (D) include: Method 1 - 4 (40 CFR Part 60, Appendix A) for determining flow rate; Method 25 (40 CFR Part 60 Appendix A) for determining total gaseous nonmethane organic emissions as carbon; Methods 25A or 25B (40 CFR Part 60, Appendix A) for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis; and the additional performance test procedures in 40 CFR §60.444 (as amended through October 17, 2000 (65 FR 61761)). To accommodate the changes made to adopted paragraph (4), this paragraph has been reformatted.

Proposed subparagraph (3)(E) has been re-located in adopted new paragraph (4) to clarify that minor modifications to all of the test methods in this section may be approved by the executive director. Adopted new paragraph (4) allows minor modifications to the test methods in paragraphs (1) - (3) to be approved by the executive director. This paragraph also allows the use of test methods other than those specified in

paragraphs (1) - (3) if approved by the executive director and validated by 40 CFR Part 63, Appendix A, Method 301. Adopted new paragraph (4) also specifies that for purposes of this paragraph, substitute "executive director" each place that Method 301 references "administrator."

Section 115.468, Monitoring and Recordkeeping Requirements

The commission adopts new §115.468, to identify the monitoring and recordkeeping sufficient to demonstrate compliance with the requirements in this division.

Adopted new subsection (a) specifies that the monitoring requirements in this subsection apply to the owner or operator of solvent cleaning operations subject to this division that uses a vapor control system in accordance with §115.463(b). New subsection (a) requires that the owner or operator permanently install and maintain monitors to accurately measure and record operational parameters of all required control devices, as necessary, to ensure the proper functioning of those devices in accordance with design specifications, including the requirements in paragraphs (1) - (4). The monitoring requirements are not recommendations contained in the EPA's 2006 CTG document; these requirements are consistent with other Chapter 115 rules for control device monitoring.

Adopted new paragraph (1) requires continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed. Adopted new paragraph (2) requires monitoring of the total amount of VOC recovered by carbon adsorption or other solvent recovery systems during a calendar month. Adopted new paragraph (3) requires continuous monitoring of carbon adsorption bed exhaust. Adopted new paragraph (4) requires monitoring of appropriate operating parameters for vapor control systems other than those specified in subsection (a)(1) - (3).

Adopted new subsection (b) specifies that the recordkeeping requirements in this subsection apply to the owner or operator of solvent cleaning operations subject to this division. As a result of revisions made to the recordkeeping requirements, proposed paragraphs (3) and (4) have been re-numbered to adopted paragraphs (4) and (5), respectively.

Adopted new paragraph (1) requires that the owner or operator maintain records of the testing data or MSDS, or documentation of the standard reference texts used to determine the true vapor pressure of each VOC component, in accordance with the requirements in §115.465(1). Adopted new paragraph (1) requires records of the concentration of all VOC used to prepare the cleaning solution and, if diluted prior to use, the proportions that each of these materials is used must be recorded. Adopted new

paragraph (1) also requires records must be sufficient to demonstrate continuous compliance with the cleaning solution VOC content or composite partial vapor pressure limits in §115.463(a). Since proposal, this paragraph has been revised to ensure the recordkeeping requirements correspond to the revised testing requirements in §115.465(1). Sufficient documentation of the standard reference text must be kept so that a commission investigator is able to verify the vapor pressure in the source referenced. However, the commission does not intend for an affected owner or operator to photocopy any portion of the standard reference text, as the commission recognizes that this may be violation of copyright laws.

Adopted new paragraph (2) requires that the owner or operator of a solvent cleaning operation claiming an exemption in §115.461 maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria. For example, maintaining records of solvent usage may be sufficient to demonstrate continuous compliance with the exemption in §115.461(a).

Adopted new paragraph (3) requires the owner or operator claiming exemption from this division in accordance with §115.461(c) to maintain records indicating the applicable division the process or operation is subject to as specified in §115.461(c)(1) and the control requirements or emission specifications used to control the VOC emissions from the solvent cleaning operation as specified in §115.461(c)(2). In addition,

adopted paragraph (3) requires the owner or operator to also comply with the applicable recordkeeping requirements from the division the process is subject to sufficient to demonstrate that the VOC emissions from the solvent cleaning operation are controlled in accordance with the control requirements or emission specifications of that division. The adopted recordkeeping requirement accommodates the new exemption in §115.461(c) incorporated in response to comments. These requirements ensure owners and operators have adequate documentation for commission investigators to verify exemption.

Adopted new paragraph (4) requires that the owner or operator maintain records of any testing conducted at an affected site in accordance with the provisions specified in §115.465(2) - (4). At proposal, adopted new paragraph (4) inadvertently limited recordkeeping of testing conducted at an affected site in accordance with §115.465(2) and (3); however, records must be kept in accordance with §115.465(4) as well. Therefore, adopted new paragraph (4) has been revised to reflect the requirement for records to be maintained in accordance with testing in §115.465(2) - (4).

Adopted new paragraph (5) requires that records must be maintained a minimum of two years and be made available upon request to authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction. The adopted record retention period is consistent with other Chapter 115 rules.

Section 115.469, Compliance Schedules

The commission adopts new §115.469, to list the compliance schedule for affected solvent cleaning operations in the DFW and HGB nonattainment areas subject to this division.

The commission adopts new subsection (a) requiring the owner or operator of a solvent cleaning operation subject to this division to comply with the requirements in this division no later than March 1, 2013. The March 1, 2013, compliance date provides affected owners and operators approximately a year and a half to make any necessary changes and ensures that any VOC reductions achieved by the adopted rule will occur prior to the ozone season in the DFW area.

The commission also adopts new subsection (b) to require the owner or operator of a solvent cleaning operation that becomes subject to the division on or after March 1, 2013, to comply with the requirements in the division no later than 60 days after becoming subject.

SUBCHAPTER E, SOLVENT-USING PROCESSES

DIVISION 7, MISCELLANEOUS INDUSTRIAL ADHESIVES

Section 115.470, Applicability and Definitions

The commission adopts new §115.470 to clearly identify the sites affected by the adopted rule requirements and to define the terms relevant to the materials used by and processes conducted at those affected sites. Since proposal, revisions have been made to the rule language to ensure the terminology referring to the materials addressed in this division is used consistently and accurately throughout the division and to improve readability of the rule requirements. Specifically, where the rule requirements reference adhesives as the only type of material subject to this division has been updated to refer to adhesives and adhesive primers. Accordingly, where the rule requirements refer to adhesive or adhesive primer application processes has been updated to application process, except when the application process is specific to only one of the materials, because this is the term defined in §115.470. Additionally, where a requirement referred to *exempt solvents* or *exempt compounds*, the commission has revised to *exempt solvent* for consistency with the terminology used throughout this division and in other divisions in Subchapter E. These changes are not specifically discussed where they occur in the adopted new Division 7 rules.

The commission adopts new subsection (a) to specify the requirements in the division apply to the owner or operator of a manufacturing operation using adhesives or adhesive

primers for any application process in the DFW and HGB areas beginning March 1, 2013. As discussed elsewhere in this preamble, in response to comments on this rulemaking, the commission revised subsection (a) from proposal to clarify the rule applicability. In the final rule for the 2008 Miscellaneous Industrial Adhesives CTG (73 FR 58489), the EPA clearly states that the CTG recommendations are intended to only apply to the FCAA, §183(e) miscellaneous industrial adhesives product category, which only includes adhesives used at industrial manufacturing operations. In the final rule, the EPA also clearly states that the 2008 Miscellaneous Industrial Adhesives CTG recommendations do not include field applied adhesives (e.g., plastic solvent welding cements used by plumbers to join plumbing pipes on construction jobs in the field). Adopted subsection (a) clarifies the rules in Division 7 apply to manufacturing operations in the DFW and HGB areas that use adhesives for any of the adhesive application processes specified in the control requirements in §115.473(a); adhesives applied in the field (e.g., adhesives applied at construction jobs in the field) are not subject to this division. For purposes of this rule, a manufacturing operation refers to a manufacturer that uses adhesives to join surfaces in the assembly or construction of a product involving the application processes listed in §115.473(a). The rule applicability in subsection (a) more accurately reflects the sources affected by the EPA's 2008 Miscellaneous Industrial Adhesives CTG.

Adopted new subsection (b) indicates that unless the context clearly indicates otherwise

or unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10, the terms used in this division have the meanings commonly used in the field of air pollution control. Adopted new subsection (b) also lists the specific definitions that apply in adopted new Division 7. Unless specifically discussed, the definitions incorporate the EPA's 2008 CTG definition recommendations.

As a result of new definitions incorporated into adopted new subsection (b), the proposed definitions have been renumbered. The definitions included in adopted new paragraphs (1) - (48) are: *Acrylonitrile-butadiene-styrene or ABS welding*; *Adhesive*; *Adhesive primer*; *Aerosol adhesive or adhesive primer*; *Aerospace component; Application process; Application system*; *Ceramic tile installation adhesive*; *Chlorinated polyvinyl chloride plastic or CPVC plastic welding*; *Chlorinated polyvinyl chloride welding or CPVC welding*; *Contact adhesive*; *Cove base*; *Cove base installation adhesive*; *Cyanoacrylate adhesive*; *Daily weighted average; Ethylene Propylenediene Monomer (EPDM) roof membrane*; *Flexible vinyl*; *Indoor floor covering installation adhesive*; *Laminate*; *Metal to urethane/rubber molding or casting adhesive*; *Motor vehicle adhesive*; *Motor vehicle glass-bonding primer*; *Motor vehicle weatherstrip adhesive*; *Multipurpose construction adhesive*; *Outdoor floor covering installation adhesive*; *Panel installation*; *Perimeter bonded sheet flooring installation*; *Plastic solvent welding adhesive*; *Plastic solvent welding adhesive primer*;

Plastic foam; *Plastics*; *Polyvinyl chloride plastic or PVC plastic*; *Polyvinyl chloride welding adhesive or PVC welding adhesive*; *Porous material; Pounds of Volatile Organic Compounds (VOC) per gallon of adhesive (minus water and exempt solvent); Pounds of Volatile Organic Compounds (VOC) per gallon of solids; Reinforced plastic composite; Rubber*; *Sheet rubber lining installation*; *Single-ply roof membrane*; *Single-ply roof membrane installation and repair adhesive*; *Single-ply roof membrane adhesive primer*; *Structural glazing*; *Subfloor installation*; *Thin metal laminating adhesive*; *Tire repair*; *Undersea-based weapon system components;* and *Waterproof resorcinol glue*.

The definition of *Aerospace component* in adopted new paragraph (5) is any fabricated part, processed part, assembly of parts, or completed unit of any aircraft including but not limited to airplanes, helicopters, missiles, rockets, and space vehicles. Adopted new paragraph (5) indicates that this definition includes electronic components to acknowledge the differences between this definition and the definition of *Aerospace component* in Division 2. The inclusion of electronic components is necessary to accurately reflect the sources affected by the EPA's 2008 Miscellaneous Industrial Adhesives CTG.

The definition of *Application process* was inadvertently left out at proposal. The commission has added adopted new paragraph (6) to define *Application process* as a

series of one or more application systems and any associated drying area or oven where an adhesive or adhesive primer is applied, dried, or cured. An application process ends at the point where the adhesive or adhesive primer is dried or cured, or prior to any subsequent application of a different adhesive. Adopted new paragraph (6) indicates that it is not necessary for an application process to have an oven or flash-off area. This definition is adopted directly from the EPA's 2008 CTG description of an application process.

The definition of *Application system* in adopted new paragraph (7) is devices or equipment designed for the purpose of applying an adhesive or adhesive primer to a surface and is based on the existing definition of *Coating application system* in §115.420(a)(3). Adopted new paragraph (7) indicates the devices may include, but are not be limited to, brushes, sprayers, flow coaters, dip tanks, rollers, hand application, and extrusion coaters. Adopted new paragraph (7) retains the definition in §115.420(a)(3) with changes to specify only those application systems that would be used to apply adhesives.

The definition of *Daily weighted average* in adopted new paragraph (15) is the total weight of VOC emissions from all adhesives or adhesive primers subject to the same VOC content limit in §115.473(a), divided by the total volume of those adhesives or adhesive primers (minus water and exempt solvent) delivered to the application system

each day. Adopted new paragraph (15) indicates that adhesives or adhesive primers subject to different VOC limits in §115.473(a) must not be combined for purposes of calculating the daily weighted average. In addition, determination of compliance is based on each application process. The adopted definition is consistent with the use of daily weighted average in other Chapter 115 rules and is the averaging period suggested in the EPA's 2008 CTG.

The definition of *Porous material* in adopted new paragraph (34) is a substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged, including, but not limited to, paper and corrugated paperboard. This definition is adopted as recommended by the CTG and includes the clarification in the CTG that wood is not considered a porous material for the purposes of the definition.

Adopted new paragraph (35) defines *Pounds of volatile organic compounds (VOC) per gallon of adhesive (minus water and exempt solvent)* as the basis for content limits for application processes. This definition was not included in the proposed rule; however, the commission adopts this definition as new paragraph (35) to provide a method for affected owners and operators to determine the amount of VOC in the adhesive or adhesive primer mixture. The definition and equation in adopted new paragraph (35) are the same as existing §115.420(a)(9) with non-substantive changes, including substituting the word *adhesive* with *coating* and *emission* with *content*. The adopted

definition in paragraph (35) includes the equation to calculate pounds of VOC per gallon of adhesive or adhesive primer (minus water and exempt solvent) using values obtained from testing data or analytical data from the MSDS. Explanations of the variables follow the equation.

Adopted new paragraph (36) defines *Pounds of volatile organic compounds (VOC) per gallon of solids* as the basis for content limits for application processes. This definition was not included in the proposed rule; however, the commission adopts this definition as new paragraph (36) to provide a method for affected owners and operators to determine the amount of VOC per adhesive or adhesive primer solids. The definition and equation in adopted new paragraph (36) are the same as existing §115.420(a)(10) with non-substantive changes, including substituting the word *adhesive* with *coating* and *emission* with *content*. The adopted definition in paragraph (36) includes the equation to calculate pounds of VOC per gallon of solids using values obtained from testing data or analytical data from the MSDS. Explanations of the variables follow the equation.

Since proposal, the commission has added a definition in adopted new paragraph (47) for undersea-based weapons system components to clearly identify the substrates that are intended to be exempt under the corresponding exemption provided under §115.471(b)(2). Adopted new paragraph (47) defines *Undersea-based weapons system*

components as the fabrication of parts, assembly of parts or completed units of any portion of a missile launching system used on undersea ships. This definition is adopted directly from the Ozone Transport Commission's model rule for Adhesives and Sealants, the basis for the EPA's 2008 CTG development.

Section 115.471, Exemptions

Adopted new §115.471, lists the exemptions recommended in the EPA's 2007 Miscellaneous Industrial Adhesives CTG. Adopted new §115.471 establishes consistency with other Chapter 115 rules and makes the rules easier to read by clearly identifying the adhesive and adhesive primer application processes that are exempt from all or portions of the subsequent rule requirements.

Adopted new subsection (a) exempts the owner or operator of adhesive application processes located on a property with actual combined emissions of VOC less than 3.0 tons per calendar year, when uncontrolled, from all adhesives, adhesive primers, and solvents used during related cleaning operations, from the requirements of this division, except as specified in §115.478(b)(2). The commission agrees with the EPA's determination that requiring these small sources to comply with the control requirements in §115.473 is not economically feasible and does not constitute RACT. In order to facilitate compliance with these rules, additional language has been incorporated into adopted new subsection (a) to exclude from the VOC emissions

calculation, adhesives that are exempt from this division. At proposal, there was no description of the VOC emissions required to be included in the calculation to determine whether the 3.0 tpy threshold is met or exceeded. Therefore, adopted new subsection (a) clarifies that the adhesives qualifying for exemption under subsections (b) and (c) are not included in this calculation because complying with the rule requirements are either technologically infeasible for these activities or the activities are already controlled under another division in Chapter 115.

Adopted new subsection (b) exempts the application processes in paragraphs (1) - (7) from the VOC limit requirements in §115.473(a) and the application system requirements in §115.473(b). The processes in paragraphs (1) - (7) are exempt from the adopted VOC content limits, application system requirements, and vapor control system requirements but remain affected by the adhesive-related and cleaning material work practices standards. At proposal, the exemption from the application system requirements in §115.473(b) was inadvertently left out. The adopted inclusion of this exemption clarifies the original intent of adopted new subsection (b) and maintains consistency with the recommendations in the EPA's 2008 CTG. Adopted paragraph (1) exempts adhesives or adhesive primers being tested or evaluated in any research and development, quality assurance, or analytical laboratory. Adopted paragraph (2) exempts adhesives or adhesive primers used in the assembly, repair, or manufacture of aerospace or undersea-based weapon system components. A minor non-substantive

revision to proposed paragraph (2) has been made for consistency with the terminology used in the adopted new definition in §115.470(b)(48). Adopted paragraph (3) exempts adhesives or adhesive primers used in medical equipment manufacturing operations. Adopted paragraph (4) exempts cyanoacrylate adhesive application processes. Adopted paragraph (5) exempts aerosol adhesive and aerosol adhesive primer application processes. Adopted paragraph (6) exempts processes using polyester-bonding putties to assemble fiberglass parts as fiberglass boat manufacturing properties. Adopted paragraph (7) exempts processes using adhesives and adhesive primers that are supplied to the manufacturer in containers with a net volume of 16 ounces or less, or a net weight of 1.0 pound or less.

Adopted new subsection (c) exempts the owner or operator of any process or operation subject to another division in Chapter 115 that specifies adhesives or adhesive primer VOC content limits used during the application processes listed in the tables in adopted new §115.473(a) from the requirements in this division. The commission adopts this exemption to ensure adhesive or adhesive primer use specified in §115.473(a) that is associated with processes and operations in another division in Chapter 115 are not subject to duplicative control requirements.

Section 115.473, Control Requirements

Adopted new §115.473, incorporates the EPA's 2008 Miscellaneous Industrial Adhesives

CTG recommendations for affected application processes in the DFW and HGB areas that the commission has determined to be RACT, except as specifically discussed.

Adopted new subsection (a) requires the owner or operator to limit VOC emissions from all adhesives and adhesive primers used during the specified application processes to the VOC content limits (minus water and exempt solvent) in the tables in adopted new subsection (a), as delivered to the application system. Adopted new subsection (a) indicates that these limits are based on the daily weighted average of all adhesives or adhesive primers delivered to the application system each day.

The tables in adopted subsection (a) contain the adhesive VOC content limits on a pound of VOC per gallon of adhesive basis (water and exempt solvent) for all of the application processes regulated by this division. If an adhesive or adhesive primer is used to bond dissimilar substrates together, then the applicable substrate category with the least stringent VOC content limit applies. Table 1 in §115.473(a) contains the adhesive VOC content limits for general adhesive application processes. Table 2 in §115.473(a) contains the adhesive VOC content limits for specialty adhesive application processes. Table 3 in §115.473(a) contains the adhesive VOC content limits for adhesive primer application processes.

Adopted new paragraph (1) requires the VOC content limits in subsection (a) to be met

using one of the options provided in subparagraph (A) or (B). Adopted new subparagraph (A) allows the application of low-VOC adhesives to comply with the VOC content limits in new §115.473(a). Adopted new subparagraph (B) allows the application of adhesives in combination with the operation of a vapor control system to comply with the VOC content limits in adopted new §115.473(a). Various compliance options are provided to give affected owners or operators the flexibility to choose the appropriate option for the adhesive application processes performed at the site. In response to comments received on requirements similar to this paragraph, subparagraph (B) has been revised to replace the term *low-VOC adhesives* with *adhesives or adhesive primers*. This change clarifies that the VOC content of the adhesives or adhesive primers used do not have to meet the VOC limits in subsection (a); instead, the combination of the VOC from the adhesives or adhesive primers used and the vapor control system efficiency must reduce the VOC emissions generated to less than or equal to the VOC emission limits in subsection (a). This change is intended to clarify the control option in subparagraph (B) and is not intended to alter the meaning of the requirement. Non-substantive changes have been made to the proposed language to ensure consistency with other similar requirements in this subchapter.

Adopted new paragraph (2) requires the owner or operator to operate a vapor control system capable of achieving an overall control efficiency of 85% of the VOC emissions from adhesives and adhesive primers if the testing requirements in §115.475(3) and (4)

are satisfied, as an alternative to demonstrating compliance with the VOC content limits in adopted new subsection (a) through the options provided in paragraph (1). This alternative provides owners and operators the operational flexibility to use means of controlling the VOC generated from adhesives and adhesive primers other than by reducing the VOC content of the materials applied, especially when the use of high-VOC adhesives and adhesive primers is necessary or desirable for product quality. Additionally, compliance with this option does not require the use of the specified application systems listed in subsection (b).

The commission adopts new paragraph (3) to require an affected owner or operator choosing to comply with the option to apply adhesives in combination with a vapor control system to meet the VOC content limits in subsection (a), to use the equations provided. This adopted new control requirement is necessary to demonstrate that the overall control efficiency of the vapor control system, when used in conjunction with adhesives, is sufficient to meet the VOC content limits in subsection (a). Adopted new paragraph (3) contains two equations; one to determine the pounds VOC per gallon of solids and one to determine the overall control efficiency needed to meet the VOC content limits in subsection (a). Since proposal, adopted new paragraph (3) has been revised to update references and the variable descriptions and to establish consistency with the terminology used throughout this section. Specifically, as discussed elsewhere in the Section by Section Discussion portion of this preamble, paragraph (3) has been

revised to replace the term *low-VOC coatings* with *adhesives or adhesive primers*. The instances where proposed paragraph (3) and the equations referenced *coatings,* the commission has replaced with *adhesives*. One of the variable descriptions for the first equation incorrectly referenced §115.471 and has been corrected to reference §115.473(a). One of the equation variables referenced *on the coating line* and has been corrected to *for each application process*. Additionally, one of the equation variables has been revised for clarification to direct the owner or operator to base the calculation on either the daily weighted average of VOC emissions or the maximum VOC emissions. These adopted changes are not intended to affect the usability of the equations. Adopted new paragraph (3) also requires control device and capture efficiency testing to be performed in accordance with the testing requirements in §115.475(3) and (4).

Adopted new subsection (b) requires the owner or operator of any application process subject to this division shall not apply adhesives or adhesive primers unless one of the application systems in paragraphs (1) - (8) is used. The application systems are required for use in combination with the compliance options specified in subsection (a)(1). Adopted new paragraph (1) lists electrostatic spray. Adopted new paragraph (2) lists spray. Adopted new paragraph (3) lists flow coat. Adopted new paragraph (4) lists roll coat or hand application, including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application. Adopted new paragraph (5) lists dip coat. Adopted new paragraph (6) lists airless spray. Adopted new

paragraph (7) lists air-assisted airless spray. Adopted new paragraph (8) lists the acceptable use of other adhesive application systems capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spray. Adopted new paragraph (8) states that for the purpose of this requirement, the transfer efficiency of HVLP spray is assumed to be 65%.

Adopted new subsection (c) requires the owner or operator of each application process subject to this division to implement the work practice procedures contained in paragraphs (1) and (2). The work practices aid in reducing VOC emissions generated from application processes and materials consumed during associated cleaning activities.

Adopted new paragraph (1) specifies the work practices the owner or operator shall implement for the storage, mixing, and handling of adhesives, adhesive primers, thinners, and adhesive-related waste materials. Adopted new subparagraph (A) requires storage of all VOC-containing adhesives, adhesive primers, and process-related waste materials in closed containers. Adopted new subparagraph (B) ensures that mixing and storage containers used for VOC-containing adhesives, adhesive primers, and process-related waste materials are kept closed at all times. Adopted new subparagraph (C) requires minimization of spills of VOC-containing adhesives, adhesive primers, and process-related waste materials. Adopted subparagraph (D) requires that VOC-

containing adhesives, adhesive primers, and process-related waste materials be conveyed from one location to another in closed containers or pipes.

Adopted new paragraph (2) specifies the work practices the owner or operator shall implement for the storage, mixing, and handling of all cleaning materials containing VOC. Any cleaning activity conducted during an adhesive application process, including surface preparation, constitutes cleaning materials and is subject to these work practices. Adopted new subparagraph (A) requires storage of all VOC-containing cleaning materials and used shop towels in closed containers. Adopted new subparagraph (B) ensures that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials. Adopted new subparagraph (C) requires minimization of spills of VOC-containing cleaning materials. Adopted new subparagraph (D) requires that VOC-containing cleaning materials be conveyed from one location to another in closed containers or pipes. Adopted new subparagraph (E) requires minimization of VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

Adopted new subsection (d) specifies that an application process that becomes subject to the provisions of §115.473(a) by exceeding the exemption limits in §115.471 is subject to

the provisions in §115.473(a) even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with §115.473(a) and one of the conditions in paragraph (1) or (2) is met. This requirement is not a CTG recommendation. Adopted new subsection (d) is consistent with other Chapter 115 rules.

Adopted new paragraph (1) requires the project that caused a throughput or emission rate to fall below the exemption limits in §115.471 to be authorized by a permit, permit amendment, standard permit, or permit by rule required by Chapters 106 or 116. Adopted new paragraph (1) requires if a permit by rule is available for the project, compliance with §115.473(a) must be maintained for 30 days after the filing of documentation of compliance with that permit by rule. Adopted new paragraph (2) requires if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

Section 115.474, Alternate Control Requirements

The commission adopts new §115.474, to provide for the owner or operator of an application process subject to this division, 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 if emission reductions are demonstrated to be substantially equivalent. This option is not a recommendation in the 2008 Miscellaneous Industrial Adhesive CTG but is consistent with the flexibility afforded to owners and operators regulated under other Chapter 115 rules.

Section 115.475, Approved Test Methods and Testing Requirements

The commission adopts new §115.475, to identify the test methods approved to determine compliance with the control requirements in this division. Adopted new §115.475 requires that the owner or operator demonstrate compliance with the VOC content limits in §115.473(a) by applying the test methods in adopted new §115.475. Adopted new §115.475 allows the owner or operator to exclude exempt solvent when determining compliance with a VOC content limit where a test method inadvertently measures compounds that are exempt solvent. The commission adopts this provision because compliance with the VOC content limits is based on the VOC concentration of an adhesive considering the contents other than water and exempt solvent. Adopted §115.475 provides, as an alternative to the test methods in this section, the VOC content of an adhesive may be determined by using analytical data from the MSDS.

Adopted new paragraph (1) requires that except for reactive adhesives, compliance with the VOC content limits in §115.473(a) must be determined using Method 24 (40 CFR Part 60, Appendix A). Adopted new paragraph (2) requires that compliance with the

VOC content limits for reactive adhesives in §115.473(a) must be determined using 40 CFR Part 63, Subpart PPPP, Appendix A (as amended through April 24, 2007 (72 FR 20237)).

Adopted new paragraph (3) requires that the owner or operator of an adhesive application process subject to §115.473(a)(2) shall measure the capture efficiency using applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; and Procedure F.2 - Fugitive VOC Emissions from Building Enclosures.

Adopted new subparagraph (A) provides two exemptions in clauses (i) and (ii) that may apply to capture efficiency testing requirements. The exemptions from capture efficiency testing provided in clauses (i) and (ii) are identical to the capture efficiency testing exemptions currently provided in the existing §115.425(a)(7)(A) and adopted to be included in adopted new §115.475. Adopted new clause (i) provides an exemption for sources with permanent total enclosure that meets the specifications of Procedure T and all VOC is directed to a control device. Adopted new clause (ii) provides an exemption if

the source uses a control device designed to collect and recover VOC and the conditions in subclauses (I) and (II) are met.

Adopted new subparagraph (B) requires that the capture efficiency must be calculated using one of the protocols referenced. The adopted subparagraph additionally requires that any affected source must use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the EPA. The capture efficiency testing protocols included in adopted new subparagraph (B) are the same as those currently required in §115.425(a)(7)(B) except for non-substantive revisions and formatting to the equations to conform to current rule formatting standards.

Adopted new clause (i) lists the protocol for the gas/gas method using TTE. Additionally, the adopted clause requires the EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The equation required for the gas/gas method using a TTE is also provided in clause (i) with the definitions for the equation variables.

Adopted new clause (ii) lists the protocol for the liquid/gas method using TTE. Additionally, the adopted clause requires the EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The equation

required for the liquid/gas method using a TTE is also provided in clause (ii) with the definitions for the equation variables.

Adopted new clause (iii) lists the protocol for the gas/gas method using the building or room enclosure in which the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The adopted clause requires that all fans and blowers in the building or room enclosure in which the affected source is located must be operating as they would under normal production. The equation required for the gas/gas method using a building or room enclosure in which the affected source is located is also provided in clause (iii) with the definitions for the equation variables.

Adopted new clause (iv) lists the protocol for the liquid/gas method using a building or room enclosure in which the affected source is located in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The adopted clause requires that all fans and blowers in the building or room enclosure in which the affected source is located must be operated as they would under normal production. The equation required for the liquid/gas method using a building or room enclosure in which the

affected source is located is also provided in clause (iv) with the definitions for the equation variables.

Adopted new subparagraph (C) requires the operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.478(a) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. Adopted new subparagraph (C) indicates the executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test. Adopted new subparagraph (C) ensures the operational parameters tested in the initial performance test are representative of those during normal operation.

Adopted new paragraph (4) lists the required methods used to determine compliance with the overall control efficiency option in new §115.473(a)(2). The methods listed in adopted new paragraph (4) are used to determine the destruction or removal efficiency of control devices, such as a thermal oxidizer, that are used to comply with §115.473(a)(2). The methods listed in subparagraphs (A) - (D) include: Methods 1 - 4 (40 CFR Part 60, Appendix A) for determining flow rate; Method 25 (40 CFR Part 60 Appendix A) for determining total gaseous nonmethane organic emissions as carbon; Methods 25A or 25B (40 CFR Part 60, Appendix A) for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis; and

the additional performance test procedures in 40 CFR §60.444 (as amended through October 17, 2000 (65 FR 61761)).

Proposed subparagraph (4)(E) has been re-located in adopted new paragraph (5) to clarify that minor modifications to all of the test methods in this section may be approved by the executive director. Adopted new paragraph (5) allows test methods other than those specified in paragraphs (1) - (4) if approved by the executive director and validated by 40 CFR Part 63, Appendix A, Method 301. Adopted new paragraph (5) also specifies that for purposes of this paragraph, substitute "executive director" each place that Method 301 references "administrator."

Section 115.478, Monitoring and Recordkeeping Requirements

The commission adopts new §115.478, which specifies the monitoring and recordkeeping requirements sufficient to demonstrate compliance with this division.

Adopted new subsection (a) specifies that the monitoring requirements in subsection (a) apply to the owner or operator of an application process subject to this division that uses a vapor control system in accordance with §115.473(a)(2). Adopted new subsection (a) specifies that the owner or operator shall install and maintain monitors to accurately measure and record operational parameters of all required control devices, as necessary, to ensure the proper functioning of those devices in accordance with design

specifications, including the requirements in paragraphs (1) - (4). The adopted control device monitoring requirements are consistent with those in other Chapter 115 rules, and the commission expects that these requirements are sufficient to ensure proper functioning of the equipment.

Adopted new paragraph (1) requires continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed. Adopted new paragraph (2) requires the total amount of VOC recovered by carbon adsorption or other solvent recovery systems during a calendar month. Adopted new paragraph (3) requires continuous monitoring of carbon adsorption bed exhaust. Adopted new paragraph (4) requires appropriate operating parameters for capture systems and control devices other than those specified in paragraphs (1) - (3).

Adopted new subsection (b) specifies that the recordkeeping requirements in paragraphs (1) - (4) apply to the owner or operator of an application process subject to this division. Adopted new paragraph (1) requires that the owner or operator shall maintain records of the testing data or the MSDS, in accordance with the requirements in §115.475(1). Adopted new paragraph (1) also requires that records must be sufficient to demonstrate continuous compliance with the VOC limits in §115.473(a). Adopted new paragraph (2) requires that the owner or operator of an application process claiming an

exemption in §115.473 shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria. For example, maintaining records of adhesive and solvent usage may be sufficient to demonstrate continuous compliance with the exemption in §115.471(a). Adopted new paragraph (3) requires that the owner or operator shall maintain records of any testing conducted at an affected site in accordance with the provisions specified in §115.475(3). Adopted new paragraph (4) requires that records must be maintained a minimum of two years and be made available upon request to authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction. The adopted record retention period is consistent with other Chapter 115 rules.

Section 115.479, Compliance Schedules

The commission adopts new §115.479, to list the compliance schedule for affected application processes in the DFW and HGB nonattainment areas subject to this division.

The commission adopts new subsection (a) requiring the owner or operator of an application process subject to this division to comply with the requirements in this division no later than March 1, 2013. The March 1, 2013, compliance date provides affected owners and operators approximately a year and a half to make any necessary changes and ensures that any VOC reductions achieved by the adopted rule will occur prior to the ozone season in the DFW area.

The commission also adopts new subsection (b) to require the owner or operator of an application process that becomes subject to this division on or after March 1, 2013, to comply with the requirements in this division no later than 60 days after becoming subject.

Final Draft Regulatory Impact Analysis

The commission reviewed the adopted rulemaking in light of the regulatory impact analysis requirements of the Texas Government Code, §2001.0225, and determined that the adopted rulemaking meets the definition of a "major environmental rule" as defined in that statute. A "major environmental rule" means a rule, the specific intent of which is to protect the environment or reduce risks to human health from environmental exposure, and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The adopted rulemaking does not, however, meet any of the four applicability criteria for requiring a regulatory impact analysis for a major environmental rule, which are listed in Texas Government Code, §2001.0225(a). Texas Government Code, §2001.0225, applies only to a major environmental rule, the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement

or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the agency instead of under a specific state law.

The adopted rules implement the EPA's RACT recommendations for sources of VOC emissions for sources of VOC emissions in the DFW eight-hour ozone nonattainment area and the HGB eight-hour ozone nonattainment area as required by the FCAA, §172(c)(1), except for EPA recommendations that would be less stringent than the current requirements of Chapter 115 for these source categories. FCAA, §172(c)(1) requires the SIP for nonattainment areas to include reasonably available control measures, including RACT, for sources of pollutants identified by the EPA as required by FCAA, §183(e). FCAA, §182(b)(2) provides that for certain nonattainment areas, states must revise their SIP to include RACT for sources of VOC emissions covered by a CTG document issued after November 15, 1990, and prior to the area's date of attainment. The EPA published CTG documents in 2006 for Industrial Cleaning Solvents (EPA 453/R-06-001) and Flexible Package Printing (EPA 453/R-06-003); in 2007 for Paper, Film, and Foil Coatings (EPA 453/R-07-003), Large Appliance Coatings (EPA 453/R-07-004), and Metal Furniture Coatings (EPA 453/R-07-005); and in 2008 for Miscellaneous Metal and Plastic Parts (EPA-453/R-08-003), Miscellaneous Industrial Adhesives (EPA-453/R-08-005), and Automobile and Light-Duty Truck Assembly Coatings (EPA-453/R-08-006). Specifically, the adopted rules will limit the VOC

content of coatings and solvents used by affected industrial sites in the DFW and HGB eight-hour ozone nonattainment areas for the following seven CTG emission source categories: flexible package printing; industrial cleaning solvents; large appliance coatings; metal furniture coatings; paper, film, and foil coatings; miscellaneous industrial adhesives; and miscellaneous metal and plastic parts coatings. The adopted rules will also limit the VOC content of coatings and solvents used by affected sites in the DFW area for the automobile and light-duty truck assembly coating CTG emission source category. To further reduce VOC emissions, the adopted rules will also implement work practice standards for coating-related activities and solvent cleaning operations.

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

determine what programs and controls are necessary or appropriate in order to meet the NAAQS. This flexibility allows states, affected industry, and the public, to collaborate on the best methods for attaining the NAAQS for the specific regions in the state. Even though the FCAA allows states to develop their own programs, this flexibility does not relieve a state from developing a program that meets the requirements of 42 USC, §7410. States are not free to ignore the requirements of 42 USC, §7410, and must develop programs to assure that their contributions to nonattainment areas are reduced so that these areas can be brought into attainment on schedule. Additionally, states have further obligations under FCAA, §172(c)(1) and §182(b)(2) to provide for RACT in nonattainment areas, such as HGB and DFW. The adopted rulemaking will implement RACT for flexible package printing; industrial cleaning solvents; large appliance coatings; metal furniture coatings; paper, film, and foil coatings; miscellaneous industrial adhesives; and miscellaneous metal and plastic parts coatings in the DFW and HGB areas, and for automobile and light-duty truck coatings in the DFW area, as well as implement work practice standards for coating-related activities and solvent cleaning operations. Implementation of RACT is a necessary and required component of developing the SIP for nonattainment areas as required by 42 USC, §7410.

The requirement to provide a fiscal analysis of proposed regulations in the Texas Government Code was amended by SB 633 during the 75th Legislature, 1997. The intent of SB 633 was to require agencies to conduct a regulatory impact analysis of

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

As discussed earlier in this preamble, the FCAA does not always require specific programs, methods, or reductions in order to meet the NAAQS; thus, states must develop programs for each area contributing to nonattainment to help ensure that those areas will meet the attainment deadlines. Because of the ongoing need to address nonattainment issues, and to meet the requirements of 42 USC, §7410, the commission routinely proposes and adopts SIP rules. The legislature is presumed to understand this federal scheme. If each rule proposed for inclusion in the SIP was considered to be a major environmental rule that exceeds federal law, then every SIP rule would require the full regulatory impact analysis contemplated by SB 633. This conclusion is

inconsistent with the conclusions reached by the commission in its cost estimate and by the Legislative Budget Board (LBB) in its fiscal notes. Since the legislature is presumed to understand the fiscal impacts of the bills it passes, and that presumption is based on information provided by state agencies and the LBB, the commission believes that the intent of SB 633 was only to require the full regulatory impact analysis for rules that are extraordinary in nature. While the SIP rules will have a broad impact, the impact is no greater than is necessary or appropriate to meet the requirements of the FCAA. For these reasons, rules adopted for inclusion in the SIP fall under the exception in Texas Government Code, §2001.0225(a), because they are required by, and do not exceed, federal law. In addition, these rules do not exceed any contract between the state and a federal agency.

The commission has consistently applied this construction to its rules since this statute was enacted in 1997. Since that time, the legislature has revised the Texas Government Code, but left this provision substantially unamended. It is presumed that "when an agency interpretation is in effect at the time the legislature amends the laws without making substantial change in the statute, the legislature is deemed to have accepted the agency's interpretation." Central Power & Light Co. v. Sharp, 919 S.W.2d 485, 489 (Tex. App. Austin 1995), *writ denied with per curiam opinion respecting another issue*, 960 S.W.2d 617 (Tex. 1997); Bullock v. Marathon Oil Co., 798 S.W.2d 353, 357 (Tex. App. Austin 1990, *no writ*). *Cf. Humble Oil & Refining Co. v. Calvert*, 414 S.W.2d 172 (Tex.

1967); *Dudney v. State Farm Mut. Auto Ins. Co.*, 9 S.W.3d 884, 893 (Tex. App. Austin 2000); *Southwestern Life Ins. Co. v. Montemayor*, 24 S.W.3d 581 (Tex. App. Austin 2000, pet. denied); and *Coastal Indust. Water Auth. v. Trinity Portland Cement Div.*, 563 S.W.2d 916 (Tex. 1978).

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

The specific intent of the adopted rulemaking is to protect the environment and to reduce risks to human health by requiring control measures for flexible package printing; industrial cleaning solvents; large appliance coatings; metal furniture coatings; paper, film, and foil coatings; miscellaneous industrial adhesives; and miscellaneous metal and plastic parts coatings in the DFW and HGB areas, and for automobile and light-duty truck assembly coatings in the DFW area that have been determined by the commission to be RACT. To further reduce VOC emissions, the adopted rules will also

implement work practice standards for coating-related activities and solvent cleaning operations. The adopted rulemaking does not exceed a standard set by federal law or exceed an express requirement of state law. No contract or delegation agreement covers the topic that is the subject of this adopted rulemaking. Therefore, this adopted rulemaking is not subject to the regulatory analysis provisions of Texas Government Code, §2001.0225(b), because although the adopted rulemaking meets the definition of a "major environmental rule", it does not meet any of the four applicability criteria for a major environmental rule.

The commission invited public comment regarding the draft regulatory impact analysis determination during the public comment period. No comments were received on the draft regulatory impact analysis determination.

Takings Impact Assessment

The commission evaluated the adopted rulemaking and performed an assessment of whether Texas Government Code, Chapter 2007, is applicable. The specific purpose of the adopted rulemaking is to implement RACT for flexible package printing; industrial cleaning solvents; large appliance coatings; metal furniture coatings; paper, film, and foil coatings; miscellaneous industrial adhesives; and miscellaneous metal and plastic parts coatings facilities in the DFW and HGB areas, and for automobile and light-duty truck assembly coatings in the DFW area. To further reduce VOC emissions, the adopted

rules will also implement work practice standards for coating-related activities and solvent cleaning operations. FCAA, §182(b)(2) provides that for certain nonattainment areas, states must revise their SIP to include RACT for sources of VOC emissions covered by a CTG document issued after November 15, 1990, and prior to the area's date of attainment. The EPA published CTG documents in 2006 for Industrial Cleaning Solvents (EPA 453/R-06-001) and Flexible Package Printing (EPA 453/R-06-003); in 2007 for Paper, Film, and Foil Coatings (EPA 453/R-07-003), Large Appliance Coatings (EPA 453/R-07-004), and Metal Furniture Coatings (EPA 453/R-07-005); and in 2008 for Miscellaneous Metal and Plastic Parts (EPA-453/R-08-003), Miscellaneous Industrial Adhesives (EPA-453/R-08-005), and Automobile and Light-Duty Truck Assembly Coatings (EPA-453/R-08-006). Texas Government Code, §2007.003(b)(4), provides that Texas Government Code, Chapter 2007 does not apply to this adopted rulemaking because it is an action reasonably taken to fulfill an obligation mandated by federal law.

In addition, the commission's assessment indicates that Texas Government Code, Chapter 2007 does not apply to these adopted rules because this is an action that is taken in response to a real and substantial threat to public health and safety; that is designed to significantly advance the health and safety purpose; and that does not impose a greater burden than is necessary to achieve the health and safety purpose. Thus, this action is exempt under Texas Government Code, §2007.003(b)(13). The

adopted rules fulfill the FCAA requirement to implement RACT in nonattainment areas. These revisions will result in VOC emission reductions in ozone nonattainment areas which may contribute to the timely attainment of the ozone standard and reduced public exposure to VOCs. Consequently, the adopted rulemaking meets the exemption criteria in Texas Government Code, §2007.003(b)(4) and (13). For these reasons, Texas Government Code, Chapter 2007 does not apply to this adopted rulemaking.

Consistency with the Coastal Management Program

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

The CMP goal applicable to the adopted rulemaking is the goal to protect, preserve, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas (31 TAC §501.12(l)). The CMP policy applicable to the adopted rulemaking is the policy that commission rules comply with federal regulations in 40 CFR, to protect and enhance air quality in the coastal areas (31 TAC §501.32). The adopted rulemaking

would not increase emissions of air pollutants and is therefore consistent with the CMP goal in 31 TAC §501.12(1) and the CMP policy in 31 TAC §501.32.

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

The commission invited public comment regarding the consistency with the CMP during the public comment period. No comments were received regarding consistency with the CMP.

Effect on Sites Subject to the Federal Operating Permits Program

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

Public Comment

The commission held public hearings on July 14, 2011, at 10:00 a.m. and 6:30 p.m. at the Arlington City Council Chambers in Arlington; on July 18, 2011, at 6:30 p.m. at the Houston-Galveston Area Council offices in Houston; and on July 22, 2011, at 10:00 a.m. and 2:00 p.m. at the Texas Commission on Environmental Quality headquarters in Austin. The July 22, 2011, hearing scheduled for 10:00 a.m. was not officially opened because no party indicated a desire to provide comment. Oral comments regarding the Chapter 115 rulemaking was presented by the American Coatings Association (ACA) at the 6:30 p.m. hearing in Houston.

The proposal was published in the June 24, 2011, issue of the *Texas Register* (36 TexReg 3834). The comment period opened on June 24, 2011, and closed on August 8, 2011. Written comments were accepted via mail, fax, and through the e-Comments system.

The commission received written comments from ACA, Flexographic Technical Association (FTA), GREEN Environmental Consulting, Inc., Hensley Industries (Hensley), National Aeronautics and Space Administration (NASA), Texas Chemical Council (TCC), EPA, and United States Navy (US Navy), and one individual.

RESPONSE TO COMMENTS

General

Comment

EPA commented that approval of the portions of the control requirements in §115.453 for the surface coating of large appliances, metal furniture, and miscellaneous metal and plastic parts and products of the proposed rules that replace emissions limits previously adopted as RACT with less stringent emissions limits would not be possible without a demonstration from the state showing that the SIP-approved limits are no longer RACT. On March 17, 2011, the EPA issued a memorandum entitled *Approving SIP Revisions Addressing VOC RACT Requirements for Certain Coatings Categories* indicating that "for situations in which a State has previously determined that more stringent applicability thresholds and/or control levels are RACT for one or more sources in a source category and the sources have complied with those requirements, then those existing controls should be considered RACT for such sources. If a state chooses to revise more stringent rules that are already in the approved SIP, so that those rules reflect the less-stringent recommended limits in the new CTGs, there are additional considerations ... The state would need to first demonstrate that the SIP-approved control requirements are not reasonably available considering technological and economic feasibility, consistent with EPA's definition of RACT." EPA requested the commission explain how the existing limits are no longer RACT for these sources that in some cases have been complying with these limits for 20 years or more.

Response

By letter dated December 8, 2008, the commission requested the EPA clarify several issues related to the recommendations in the following three CTG documents: Control Techniques Guidelines for Large Appliance Coatings (EPA 453/R-07-004), issued in 2007; Control Techniques Guidelines for Metal Furniture Coatings (EPA 453/R-07-005), issued in 2007; and Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings (EPA 453/R-08-003), issued in 2008. A number of the recommended VOC content limits for specific coatings categories in these 2007 and 2008 CTG documents are less stringent than the more general VOC content limits specified in the following EPA guideline series recommendations: Control of Volatile Organic Emissions from Existing Stationary Sources - Volume V: Surface Coating of Large Appliances (EPA-450/2-77-034), issued in 1977; Control of Volatile Organic Emissions from Existing Stationary Sources - Volume III: Surface Coating of Metal Furniture (EPA-450/2-77-032), issued in 1977; and Control of Volatile Organic Emissions from Existing Stationary Sources - Volume VI: Surface Coating of Miscellaneous Metal Parts and Products (EPA-450/2-78-015), issued in 1978. The commission requested clarification to ensure that implementing the new 2007 and 2008 CTG recommendations would not be

considered backsliding and to be certain that the commission has the appropriate information to determine whether the CTG recommendations actually represent RACT for Texas. On March 17, 2011, the EPA issued a guidance memorandum regarding these three CTG categories entitled *Approving SIP Revisions Addressing VOC RACT Requirements for Certain Coatings Categories*. The EPA stated in the memorandum that: "... if a state believes the volume usage distribution among the general and specialty categories in the docket is representative of the distribution in the nonattainment area, we believe that if a state undertakes wholesale adoption of the new categorical limits in a specific CTG, the state may rely on the assessments in the docket to demonstrate that the range of new limits will result in an overall reduction in emissions from the collection of covered coatings."

Consistent with this EPA memorandum, on June 8, 2011, the commission proposed rulemaking (Rule Project Number 2010-016-115-EN) to implement the 2007 and 2008 CTG-recommended RACT limits for these three emission source categories. The proposed rulemaking provided discussion regarding the estimated percent reductions for these CTG categories that supported the EPA's position that applying the new 2007 and 2008 CTG-recommended limits as a whole will result in net VOC

emissions reductions. Despite the state's demonstration that implementing the 2007 and 2008 CTG-recommended approach would not interfere with attainment of, or reasonable progress towards attainment of, the ozone standard for the HGB and DFW areas, the EPA commented that in order for the proposed rules to be approved as RACT, the state must also demonstrate that the existing Chapter 115 limits for these CTG categories, which were based on the EPA's original 1977 and 1978 recommendations, are no longer technologically or economically feasible.

The commission contends that by promulgating higher CTG-recommended RACT limits for these source categories in 2007 and 2008, the EPA has established that the original 1977 and 1978 recommended limits, and thus the existing Chapter 115 limits, are no longer technologically or economically feasible. The EPA defines RACT as the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53762, September 17, 1979). In the 2007 and 2008 CTG documents the EPA provides recommendations for RACT for these source categories based on available information. The EPA claims the 2007 and 2008 CTG RACT recommendations were based on available information and a review of existing federal and state regulations,

including the original 1977 and 1978 recommendations for these emission source categories. The EPA goes on to indicate that 21 states have adopted the EPA's 1977 recommendations for large appliance coating; 32 states have adopted the EPA's 1977 recommendations for metal furniture coating; and as many as 36 states have adopted the EPA's 1978 recommendations for metal parts surface coating. Given that Texas had previously adopted 1977 and 1978 recommendations for these three source categories, the Chapter 115 rules should have been included in the EPA's review of existing regulations. If upon review of the existing Chapter 115 regulations the EPA had determined that the limits recommended in 1977 and 1978 were technologically and economically feasible, then those limits presumably would have been included in the final 2007 and 2008 CTG recommendations for these source categories.

In accordance with FCAA, §183(e)(3)(C), the EPA determined the 2007 and 2008 CTG documents issued for these three source categories would be substantially as effective as national regulations in reducing VOC emissions (72 FR 57215, October 9, 2007; 73 FR 40230, July 14, 2008). FCAA, §183(e)(3)(A) requires any regulations issued under FCAA, §183(e), including the 2007 and 2008 CTG documents, to be based on best available controls, which are defined under FCAA, §183(e)(1)(A) as the degree of

emissions reduction that the EPA determines, on the basis of technological and economic feasibility, health, environment, and energy impacts, is achievable through the application of the most effective equipment, measures, processes, methods, systems or techniques, including chemical reformulation, product or feedstock substitution, repackaging, and directions for use, consumption, storage, or disposal. If the lower limits in the EPA's original 1977 and 1978 recommendations were in fact technologically or economically feasible for these specialty coating categories, the EPA presumably would have retained these limits in the 2007 and 2008 final CTG documents in accordance with FCAA, §183(e)(1)(A).

The Large Appliance Coatings and Metal Furniture Coatings draft CTG only recommended general coating limits for these source categories. However in response to public comments (72 FR 57215, October 9, 2007), the EPA's final 2007 CTG recommendations for these two source categories also included higher limits for several specialty coatings. The specialty coating limits included in the 2007 CTG are higher than the EPA's 1977 recommendations for these two source categories. In the response to public comments, the EPA acknowledged that the higher specialty coating limits recommended in the final 2007 CTG were necessary to accommodate the

range of coatings needed in these industries.

However, the EPA's 2007 and 2008 CTG documents do not specifically explain why the lower limits included in the EPA's original 1977 and 1978 recommendations for these source categories are no longer technologically or economically feasible. In absence of any specific information indicating that the existing Chapter 115 limits for these source categories are not technologically or economically feasible, and given the EPA's stated intention to disapprove the rules without such a demonstration, the commission is obligated under the FCAA to revise the proposed limits for these source categories. Therefore, in response to this comment, the commission is revising the proposed limits for these three source categories to only include the EPA's 2007 and 2008 CTG-recommended limits that are equivalent to or lower than the existing Chapter 115 limits. Where the EPA's 2007 and 2008 CTG-recommended limits are less stringent than the EPA's original 1977 and 1978 recommended limits, the commission is retaining the original emission limit in the current Chapter 115 rule, except for the high performance architectural coatings limit for the miscellaneous metal parts and products category.

The EPA only addressed the technological and economic feasibility issues

associated with high performance architectural coatings in support of its presumptive RACT recommendations in the 2008 CTG for Miscellaneous Metal and Plastic Parts Coatings. The commission agrees with the EPA that the 6.2 lb VOC/gal coating constitutes RACT for this coating type and that promulgating a VOC limit less than 6.2 lb VOC/gal coating may restrict the application of liquid high performance architectural coatings that are currently available and in use today. The cost of converting to powder coatings or installing and operating add-on controls to meet a lower limit is not a reasonable alternative compared to the emission reduction that would be achieved. In light of this information, as provided in the EPA's 2008 CTG, the commission has determined a VOC limit of 6.2 lb VOC/gal coating for high performance architectural coatings to be RACT. The commission contends that the adoption of this coating VOC limit for high performance architectural coatings, which is higher than in the existing Chapter 115 rules, does not interfere with attainment of, or reasonable progress towards attainment of, the ozone standard for the HGB and DFW areas. Therefore, the commission is making no change to the proposed VOC limit of 6.2 lb VOC/gal coating for high performance architectural coatings in the Chapter 115 miscellaneous metal parts and products coatings rules in response to this comment; the commission is adopting to retain the EPA's 2008 Miscellaneous Metal and Plastic Parts CTG-recommended 6.2 lb

VOC/gal coating limit for high performance architectural coatings in the adopted Chapter 115 miscellaneous metal parts and products coatings rules.

Comment

EPA expressed concern with the compliance schedules in §§115.439(d), 115.459(b), 115.469(b), and 115.479(b) due to the allowance of an additional 60 days for a source to comply with the rules after becoming subject. EPA suggested modifying the rules to require compliance with the rules, where possible, by the beginning of ozone season, March 1, 2013.

Response

The commenter misunderstood the context of these compliance schedule requirements. The additional 60-day period for compliance is only applicable to those sources that become subject to one of the rules affected by this rulemaking, after the original March 1, 2013, compliance date. Any source operating prior to March 1, 2013, is required under §§115.439(c), 115.459(a), 115.469(a), and 115.479(a) to be in compliance with all applicable rules on or before March 1, 2013. The compliance schedules cited by the commenter are intended to provide adequate time for an owner or operator to configure their process in order to comply with the rule requirements. This provision is consistent with other adopted Chapter 115

rules and the commission maintains that is unreasonable to expect an owner or operator to comply with these rules immediately upon becoming subject. The commission makes no change in response to this comment.

Comment

EPA suggested changing the title of Division 5 to readily distinguish the rules in Division 2 from the rules in Division 5.

Response

The commission declines to make the suggested change. The title of Division 5 is similar to the title of Division 2 because both are indicative of the processes regulated in each. The commission believes that the titles are sufficient to appropriately direct owners and operators of surface coating processes to the rules that affect them.

Comment

ACA commented that the EPA's CTG should be consistent with other EPA rulemakings for this industrial sector. ACA commented that coatings manufacturers have provided EPA product information to assist in their evaluation of the National Emission Standard for Hazardous Air Pollutants for Shipbuilding and Ship Repair Operations, and that the industry supports rulemaking that will provide a consistent approach to reduce

emissions of both VOC and hazardous air pollutants in this industrial sector.

Response

The commission appreciates the comment. However, ensuring consistency among future federal rulemakings for this coating category is beyond the scope of the commission's current rulemaking. The commission makes no change in response to this comment.

Comment

An individual commented that the one thing no successful businessman can handle is the constant changing of regulations that potentially require equipment and increased employment to support such equipment when one never knows if he or she will be allowed to operate the purchased equipment. The individual commented that a reasonable and prudent businessman needs to be able to plan and that has been impossible with the ever-changing regulations that EPA has come forth with.

Response

The commission appreciates the comment and acknowledges that the changing regulations can be challenging. The purpose of this rulemaking is to fulfill the state's obligation under FCAA, §172(c)(1) and §182(b)(2), to submit a SIP revision that implements RACT for VOC emission sources

located in nonattainment areas classified as moderate and above, addressed in a CTG issued from November 15, 1990, through an area's attainment date. When enacting rules, the commission considers the appropriate implementation deadlines. The commission is making no changes in response to this comment.

Flexible Package Printing

Comment

FTA commented that it strongly disagrees with the requirement in §115.432(c)(1)(C) for flexible package printers to meet an 80% overall control efficiency regardless of the first installation date of the oxidizer. FTA commented that this approach may require printers that installed oxidizers at an earlier date to replace equipment and would be a significant financial hardship, as new oxidizers start in the hundreds of thousands of dollars. FTA commented that the EPA's Flexible Package Printing CTG recommends a more reasonable approach consistent with a RACT regulation, which allows add-on controls installed prior to specific dates to have lower overall control of VOC emissions. FTA added that the commission's claim that the EPA's approach would create backsliding is not justified.

Response

The commission maintains that the EPA's 2006 Flexible Package Printing

CTG-recommended approach for controlling VOC emissions from flexible package printing may encourage the installation of older, less efficient equipment and may create backsliding issues if a source becomes subject to a lower efficiency standard as a result of equipment replacement.
The commission has determined that an 80% overall control efficiency represents RACT for flexible package printing processes in the DFW and HGB areas. Based on a review of permits for flexographic printing and rotogravure printing processes, the only two types of printing processes identified in the 2006 CTG as conducting flexible package printing, the majority of printers are using add-on control equipment that achieves at least an 80% overall control efficiency, demonstrating that this level of control is reasonably available considering technological and economic feasibility.

Flexible package printers with the potential to emit greater than or equal to 25 tpy of uncontrolled VOC emissions that choose to use a vapor control system to comply with the adopted rules, are not limited to operating at an 80% overall control efficiency. The adopted new control requirements in §115.432(c) provide different compliance options to provide flexibility for affected owners and operators. Flexible package printers can instead choose the compliance option that requires the use of coatings in

conjunction with a vapor control system to meet the VOC limits. Under this compliance option, an owner or operator does not have to meet a certain VOC limit or meet a certain overall control efficiency; rather, the combined coating VOC content and the overall control efficiency must meet one of the VOC limits. The commission makes no changes in response to this comment.

Miscellaneous Metal and Plastic Parts Coatings

Applicability and Definitions

Comment

TCC commented that miscellaneous plastic parts and products are listed under the applicability section in §115.450(a)(4), but that there is no subsequent mention of these parts and products. TCC suggested that the commission clarify whether miscellaneous plastic parts and products are included in the Division 5 rules.

Response

In the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG, the EPA did not recommend a definition for miscellaneous plastic parts and products. However, in order to clarify the types of such parts and products referred to in §115.450(a)(3), proposed as §115.450(a)(4), the commission is revising the rule to include a definition for miscellaneous plastic parts and

products in §115.450(c)(5)(R) based on the description contained in the EPA's 2008 CTG.

Comment

GREEN Environmental Consulting, Inc., suggested revising the definition of extreme performance coating to include marine shipping containers and downhole drilling equipment as examples of products that may need the application of this coating type. GREEN Environmental Consulting, Inc., also suggested including extreme environmental conditions, such as continuous outdoor exposure, in the list of conditions that a miscellaneous metal parts and products may be subject to and would need the application of an extreme performance coating.

Response

The commission is revising the rules to reflect the suggested changes. The commenter's first suggested change provides additional clarification of the types of miscellaneous metal parts that may be coated with an extreme performance coating, without altering the meaning of the definition. Similarly, the commenter's other suggested change incorporates properties of an extreme performance coating that are listed in the existing rules but are not included in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG-recommended definitions and, therefore, were not included

in the proposed extreme performance coating definition.

Additionally, because the definition of extreme performance coatings in §115.450(c)(3)(B) and (4)(B) for metal furniture and large appliances, respectively, are derived from the extreme performance coating definition in §115.450(c)(5)(Q) for miscellaneous metal and plastic parts coating, the change made in response to this comment extends to the other coating categories and is discussed in the Section by Section Discussion portion of this preamble for those categories.

Comment

Hensley commented that at its steel foundry, several types of pastes and coatings are used in the mold and core making processes such as mold-release, core paste, and refractory coating (mold wash). Hensley requested clarification of the mold-seal coating definition.

Response

As defined in the EPA's 2008 CTG and subsequently as proposed and adopted in §115.450(c)(5)(P), a mold-seal coating is the initial coating applied to a new mold or a repaired mold to provide a smooth surface that when coated with a mold release coating, prevents products from sticking

to the mold. The miscellaneous metal and plastic parts coatings rules regulate the application of mold-seal coatings to the extent these coatings are applied during the fabrication or repair of the mold itself. The commission makes no change in response to this comment.

Comment

GREEN Environmental Consulting, Inc., suggested defining a designated on-site maintenance shop as an area designated at a site where coatings are applied to one or more miscellaneous metal parts or products on a routine basis. GREEN Environmental Consulting, Inc., suggested adding that the miscellaneous metal parts or products being coated in a designated on-site maintenance shop would be those that are used elsewhere on-site as part of that site's permanent operation.

Response

As described elsewhere in this Response to Comments section, the commission is including a new exemption in §115.427(a)(8) from the requirements in Chapter 115, Subchapter E, Division 2 for the re-coating of used miscellaneous metal parts and products at a designated on-site maintenance shop in DFW and HGB areas that was exempt from the VOC emission limits in §115.421(a)(9) prior to January 1, 2012, or that begins operation on or after January 1, 2012. However, the re-coating of used

miscellaneous metal parts and products at a designated on-site maintenance shop that was subject to §115.421(a)(9) prior to January 1, 2012, remains subject to the Division 2 requirements. For additional clarification, §115.427(a)(8) indicates that for purposes of the exemption, a designated on-site maintenance shop is an area at a site where used miscellaneous metal parts or products are re-coated on a routine basis. Additionally, the adopted Division 5 rules do not apply to designated on-site maintenance shops and therefore a definition in §115.450 is not necessary.

With regard to the commenter's suggested alterations to the meaning of a designated on-site maintenance shop, the commission disagrees to the extent that the miscellaneous metal parts and products coated would be limited to those that are used elsewhere at the same site location as part of the permanent operation. While the designated on-site maintenance shop applicability does include coating conducted for this purpose, the coating of miscellaneous metal parts and products for use in a site's permanent operation at a separate location, where both the location of the coating and the location where the metal part or product serves its function are under the same ownership, is also considered a designated on-site maintenance shop coating operation. The commission makes no change in response to this comment.

Comment

NASA and the US Navy suggested the commission remove designated on-site maintenance shops from the rule applicability in both Divisions 2 and 5 for the following reasons: there is no definition of this type of facility in the proposed rules; the frequency of what is considered routine is unclear; the federal maximum available control technology standards for miscellaneous metal parts and products excludes facility maintenance operations; industrial maintenance coatings are already covered by the national Architectural and Industrial Maintenance rule; and the EPA's Miscellaneous Metal and Plastic Parts Coatings CTG does not include designated on-site maintenance shops in the applicability.

Response

The existing Chapter 115, Subchapter E, Division 2 rules were revised in July 2000 (25 TexReg 6754) to reflect a rule interpretation that determined the miscellaneous metal parts and products coatings rules should be applied to original equipment manufacturers, off-site job shops that coat new or used parts or products, and designated on-site maintenance shops that re-coat used parts or products. Because this rulemaking was submitted as a SIP revision and approved by the EPA, providing an exemption for designated on-site maintenance shops that are currently complying with the

existing Chapter 115, Division 2 rules would be backsliding.

However, the commission has determined that it is not necessary to apply these RACT requirements to designated on-site maintenance shops that re-coat used parts or products in order to meet the mandates of the FCAA under §172(c)(1) and §182(b)(2). The EPA's 1978 CTG recommendations for this source category, which were the basis for the Division 2 rules, were clearly not intended to apply to designated on-site maintenance shops that re-coat used parts or products. The commission also agrees that the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG recommendations do not apply to designated on-site maintenance shops.

Therefore, in response to this comment, the commission is adopting §115.427(a)(8) to limit the rule applicability to the designated on-site maintenance shops in the DFW and HGB areas that were subject to §115.421(a)(9) prior to January 1, 2012. Only those designated on-site maintenance shops that re-coat used parts or products that were exempt from §115.421(a)(9) in Division 2 prior to January 1, 2012, the beginning of the calendar year immediately following the approximate effective date of these rules, or that begins operation on or after January 1, 2012, are exempt from all requirements in Division 2. Additionally, in response to this

comment, the commission is revising §115.450(a) to exclude re-coating of used miscellaneous metal parts and products at designated on-site maintenance shops from the coatings rule applicability in Division 5. The adopted revisions prevent any potential backsliding concerns by requiring sources that are currently complying with these rules in Division 2 to continue to meet these VOC limits. The adopted revisions are consistent with the intent of EPA's 1978 and 2008 CTG RACT recommendations for miscellaneous metal parts and products coatings and the commission maintains the rules continue to satisfy RACT requirements for this CTG emission source category.

Comment

TCC commented that the rules define extreme performance coating in §115.450(c)(5)(I) and specifically mention chronic exposure to corrosive, caustic, or acidic agents. TCC requested clarification of whether the term is intended to cover the outer coating of pipes that carry acids and caustics.

Response

The extreme performance coating definition in §115.450(c)(5)(I) refers to the miscellaneous metal or plastic part surface that is physically exposed to the corrosive, caustic, or acidic agents. If the pipes carry corrosive, caustic,

or acidic substances but no contact is made between the outer coating of these pipes and these agents, then the purpose of the coating does not meet the condition under §115.450(c)(5)(I)(i) in the extreme performance coating definition. However, it is possible that the pipes may meet a condition under one of the other clauses in the extreme performance coating definition. The commission makes no change in response to this comment.

Comment

TCC requested clarification on whether it is the commission's intent to regulate the coating of newly fabricated piping or other equipment at an on-site maintenance shop, which appears to fall outside of the miscellaneous metal parts and products definition, while the re-coating of some equipment at an on-site job shop appears to be included. In addition, TCC requested clarification on whether the coating of newly fabricated piping or other equipment at an on-site lay-down yard would be a regulated activity. TCC stated that the EPA excludes the coating of new and existing support structures, piping, and equipment as part of routine maintenance activities, considered to be facility maintenance operations, from 40 CFR, Part 63, Subpart MMMM for Surface Coating of Miscellaneous Metal Parts and Products.

Response

In response to other comments on this rulemaking, the commission is revising §115.450(a) to exclude designated on-site maintenance shops from the miscellaneous metal parts and products coatings rule applicability in Division 5. Additionally, the commission is adding §115.427(a)(8) to limit the Division 2 rule applicability to only those designated on-site maintenance shops that were required to comply with the emission specifications in §115.421(a)(9) prior to January 1, 2012, which is the beginning of the calendar year immediately following the effective date of this rulemaking. The re-coating of used miscellaneous metal parts and products at a designated on-site maintenance shop that was exempt from §115.421(a)(9) prior to January 1, 2012, or that begins operation on or after January 1, 2012, is exempt from all requirements in Division 2.

The coating of newly fabricated miscellaneous metal parts and products, including piping or other equipment, for a site's own use does not constitute coating at a designated on-site maintenance shop and does not meet the miscellaneous metal parts and products coatings rule applicability in Division 2. Only designated areas where the routine re-coating of miscellaneous metal parts and products takes place is considered a designated on-site maintenance shop. The location of the designated on-site

maintenance shop is irrelevant for purposes of the Division 2 rules; the designated on-site maintenance shop may be an area reserved inside a site building or a location on the site's grounds outdoors.

Comment

TCC requested clarification on whether extreme performance coatings applied to newly fabricated piping and equipment, which do not meet the corresponding definition in the Division 5 rules, would now be considered a general-use coating.

Response

Coatings that do not meet a specific coating category definition in Division 5 are considered general-use coatings and are subject to the VOC content or emission limit for general-use coatings. This requirement is adopted directly from the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG recommendations. As described elsewhere in this Response to Comments section, the commission recognizes that some coatings may meet more than one coating category definition. For these instances, the commission is revising the rules to indicate that the least stringent VOC limit applies.

Comment

TCC commented that an activity subject to the miscellaneous metal and plastic parts coatings rules may use a coating that could be classified as an extreme performance coating, heat resistant coating, or as a miscellaneous metal parts and products coating, depending on the application. TCC requested that the commission clarify the intended use of Table 1 and Table 2 in §115.453(a)(1)(C).

Response

The commission recognizes that some coatings may meet more than one coating category definition. This issue was not addressed in the EPA's CTG documents; however, the existing miscellaneous metal parts and products coatings rules provide this clarification. To facilitate compliance and improve the clarity of these rules, the commission is revising the adopted rules in response to this comment to indicate that in these instances, the coating type with the least stringent VOC limit applies.

Some of the coating categories regulated in §115.453(a)(1) provide various options to comply with the rules, including the use of low-VOC coatings and the use of coatings in conjunction with the operation of a vapor control system. The VOC content limits in Table 1 in §115.453(a)(1)(C) are provided in lb VOC/gal coating and the VOC emission limits in Table 2 in

§115.453(a)(1)(C) are provided in pounds of VOC per gallon of solids. As explained in the Section by Section Discussion portion of this preamble, affected sources choosing to meet the rule requirements through the use of low-VOC coatings are required to meet the VOC content limits established in Table 1 in §115.453(a)(1)(C). Affected sources choosing to meet the rule requirements through the use of coatings in conjunction with the operation of a vapor control system are required to meet the VOC emission limits established in Table 2 in §115.453(a)(1)(C).

Exemptions

Comment

ACA requested a small container exemption for pleasure craft touch-up and repair coatings to allow minor repairs at the end of the painting line and avoid having to completely re-coat the pleasure craft.

Response

In response to this comment, the commission is adopting new §115.451(n) to exempt touch-up and repair coatings from meeting the VOC limits in §115.453(a)(1)(F) if those coatings are supplied by the manufacturer in containers that do not exceed 1.0 quart and the use of those coatings at the site does not exceed 50 gallons per calendar year. The commenter did not

suggest a quantity for the annual limit on touch-up and repair coatings. The 50-gallon limit is equivalent to the volume of coatings exempt in §115.451(i)(4) for miscellaneous plastic parts and products. In addition, the commission is including definitions for repair coatings and touch-up coatings in §115.450(c)(8)(I) and (K), respectively. The commission agrees that providing an exemption for touch-up and repair coatings used in small quantities eliminates the need to completely re-coat a pleasure craft and, as a result, reduces overall VOC emissions from pleasure craft coating. This exemption for coatings used in small quantities is also consistent with the EPA's recommended exemptions for other coating categories in the EPA's Miscellaneous Metal and Plastic Parts Coating CTG.

Comment

TCC requested confirmation on whether the exemptions and definition of architectural coating in Division 5 includes painting pipes in the process unit, because these pipes are in the field and are stationary structures. TCC requested confirmation on whether the Division 5 rules apply to the coating of pipes in the process unit in addition to the coating of miscellaneous metal parts and products in lay-down yards.

Response

As stated elsewhere in this Response to Comments section, the coating of

process unit pipes that are in place is not a miscellaneous metal parts and products coating activity subject to the Division 2 or Division 5 rules. However, removing and transporting the process unit pipes to an on-site area where re-coating of these parts and products is conducted on a routine basis is considered a designated on-site maintenance shop coating operation that is subject to the miscellaneous metal parts and products coatings rules. As discussed elsewhere in this Response to Comments section, the applicability of miscellaneous metal parts and products coating at a designated on-site maintenance shop has been modified. The commission makes no change in response to this comment.

Comment

TCC requested the commission clarify whether safety-indicating coatings exempt under §115.451(f)(3) include those temperature-sensitive coatings used to identify hazards in an industrial setting.

Response

The EPA's 2008 CTG did not specify the types of coatings categorized as safety-indicating coatings. However, in order to facilitate the usability of this rule, the commission is incorporating a definition for safety-indicating coatings in §115.450(c)(5)(AA). A safety-indicating coating is defined as a

coating that changes physical characteristics, such as color, to indicate unsafe conditions. In absence of an EPA-recommended definition, the commission relied on the definition for safety-indicating coatings established in the SCAQMD Rule 1107, Coating of Metal Parts and Products, since the definitions in the CTG pertaining to miscellaneous metal and plastic parts coating are based on this rule.

Comment

NASA and the US Navy requested an exemption be added to §115.451 for miscellaneous metal or plastic parts and product surface coating processes performed at on-site installations owned or operated by the Armed Forces of the United States or NASA, or the surface coating of military munitions manufactured by or for the Armed Forces of the United States. NASA and the US Navy requested the exemption because extensive field testing is required before reformulated coatings and solvents can be approved for use and because the proposed regulations would be impractical and extremely costly for NASA and the US Navy due to the complexity of coating operations, the number of coatings and solvents used, and the number of different items and substrates coated. NASA and the US Navy also requested exemption from the miscellaneous metal and plastic parts coatings rules because historically accurate coatings for these items must be used.

Response

The rules in Division 5 are necessary to implement RACT requirements for miscellaneous metal and plastic parts coatings as required in FCAA, §172(c)(1) and §182(b)(2). The commission disagrees that a complete exemption for the Armed Forces of the United States or NASA is consistent with the EPA's recommendations for this CTG emission source category. Some of the specific coating categories recommended by the EPA for miscellaneous metal and plastic parts and products are specific to military application. Granting the categorical exemption requested for NASA, the US Navy, and other military organizations could potentially result in EPA disapproval of the Chapter 115 RACT rules and corresponding SIP revisions.

However, the miscellaneous metal and plastic parts coatings rules do not apply to the other coating categories specifically regulated in Divisions 2 or 5. The commission recognizes that an explicit exemption for those specific coating categories from the miscellaneous metal and plastic parts coatings rules in Division 5, similar to the exemption provided in Division 2, was not incorporated into the proposed rules and may have created confusion. In response to this comment, the commission is adding an exemption in §115.451(b)(4) to reflect the exclusion of all other coating categories in Divisions 2 and 5 from the miscellaneous metal and plastic parts coatings

rules. Adopted new §115.451(b)(4) clearly indicates that any item characterized by the other coating categories specified in Division 2 and Division 5 is not considered miscellaneous metal or plastic parts and products and is therefore not subject to any of the corresponding requirements. Additionally, the commission does not consider the adopted rules any less technologically or economically feasible for NASA and the US Navy as the rules are for other affected entities, which includes some small businesses.

Control Requirements

Comment

GREEN Environmental Consulting, Inc., suggested revising §115.453(a)(1) to remove the term low-VOC coatings from the compliance option that requires low-VOC coatings in combination with a vapor control system to meet the VOC emissions limits. GREEN Environmental Consulting, Inc., added that the removal of this term makes it clear that the option of using a VOC coating that exceeds the VOC emissions limits, when used in conjunction with controls, is available.

Response

The commission agrees that removing the term low-VOC with respect to the option allowing the use of low-VOC coatings in combination with the

operation of a vapor control system, clarifies the rule. In addition to the rule modification in §115.453(a)(1), the commission is revising the rules where this option is provided in §§115.432(c)(1)(A), 115.453(a)(4) and (5), and 115.473(a)(1)(B), for consistency among the rules. These changes enhance the readability and usability, but do not alter the meaning of the respective rules.

Comment

GREEN Environmental Consulting, Inc., suggested including hand-held paint rollers in §115.453(c)(6) to ensure that this method is acceptable under this provision. GREEN Environmental Consulting, Inc., commented that often the term "roller coat" listed in §115.453(c)(4) refers to rollers used in an industrial rolling machine that mechanically applies coating.

Response

The commission expects that hand-held paint rollers are synonymous with brush coating listed in §115.453(b)(6). Therefore, the commission is revising §115.453(b)(6) to include the commenter's suggestion to include hand-held paint rollers as a complaint coating application system.

Comment

ACA commented that it is imperative to work with the EPA, its regional offices, and state and local agencies to develop RACT rules given that the pleasure craft industry was not afforded the usual opportunity to consult with the EPA on the development of its CTG RACT recommendations because the draft Miscellaneous Metal and Plastic Part Coatings CTG did not mention pleasure craft surface coating operations.

ACA commented that the pleasure craft coating limits in the EPA's final Miscellaneous Metal and Plastic Part Coatings CTG recommendations do not represent RACT for the pleasure craft industry. ACA commented that SCAQMD Rule 1106.1, which was the basis for these CTG recommendations, should not be identified as RACT for pleasure craft coating operations in other areas since these requirements were adopted to address the severe ozone nonattainment conditions in the South Coast air basin. ACA commented that the CTG-recommended VOC limits and compliance dates are too restrictive to allow coating manufacturers to formulate products that meet the VOC limits, while also maintaining adequate technical performance and meeting customer's aesthetic requirements.

ACA requested several revisions to the proposed rules to establish appropriate RACT requirements for pleasure craft coating operations.

For *extreme high-gloss coatings*, ACA suggested implementing a VOC limit of 5.0 lb VOC/gal coating and revising the definition to any coating that achieves greater than 90% reflectance on a 60 degree meter. ACA commented that the controlled application conditions that make the use of high solids and water-based technologies possible in other industries are not available for the pleasure craft coating industry. ACA also commented that the low-VOC technologies available at this time do not provide the aesthetic properties, functionality, and durability required from an extreme high-gloss coating.

For *finish primer/surfacer coatings*, ACA suggested implementing a VOC limit of 5.0 lb VOC/gal coating. ACA commented that a higher VOC solvent is required for both the topcoats and the primers that go beneath them to achieve the finish that is extremely smooth, glossy, and durable. In addition, high solids or low-VOC primers often require additional sanding to achieve the necessary smooth surface and the use of these coatings necessitates a change in traditional working practices in yards to overcome the increased health hazard associated with the increased dust levels.

For *other substrate antifoulant coatings*, the ACA suggested implementing a VOC limit of 3.34 lb VOC/gal coating. Antifouling coating formulations are currently registered with the EPA based on the percentage weight of biocide in the wet paint. Reducing the VOC content of the coating reduces the percentage of biocide in the dry film with a

concomitant reduction in performance of the coating and increase in re-coating frequency. In addition, low-VOC antifoulant coatings often result in a rougher film; the roughness of the hull contributes directly to drag.

For *antifoulant sealer/tie coatings*, ACA suggested introducing a VOC limit of 3.5 lb VOC/gal coating and the following definition: a coating applied over biocidal antifoulant coating for the purpose of preventing release of biocides into the environment, or to promote adhesion between an antifoulant and a primer or other antifoulants. The 2007 International Maritime Organization Antifouling Systems convention prohibits the use of certain biocides in the antifoulant coatings applied to the hulls of any marine vessels entering the waters of countries that are signatories to the convention. A specialized coating, an antifoulant sealer/tie coat, is required to seal in certain prohibited antifoulant coatings and to promote adhesion of biocide-free, non-stick foul release coatings when applied to vessels. As alternative compliance options, the ACA suggested implementing an averaging approach and extending the compliance date to allow the development, testing, and commercial introduction of low-VOC pleasure craft coatings.

Response

In response to ACA's request for reconsideration of the pleasure craft CTG VOC limits, the EPA issued a memorandum on June 1, 2010, entitled *Control Technique Guidelines for Miscellaneous Metal and Plastic Part*

***Coatings-Industry Request for Reconsideration*, "recommending that the pleasure craft industry work with state agencies during their RACT rule development process to assess what is reasonable for the specific sources regulated because the CTG impose no legally binding requirements on any entity, including pleasure craft coating facilities."**

Based on the information submitted by ACA, and in accordance with the EPA's guidance to work with the pleasure craft industry on this issue, the commission agrees that some of the pleasure craft coating VOC limits included in the EPA's CTG recommendations are not technologically feasible at this time. The commission agrees that the coating VOC limits requested by ACA are technologically and economically feasible and therefore constitute RACT for the pleasure craft industry in Texas. In response to this comment, the commission is revising §115.453(a)(1)(F) to reflect ACA's recommended VOC limits for extreme high-gloss coating, finish primer-surfacer coating, other substrate antifoulant coating, and antifoulant sealer/tie coating. The commission is also revising §115.450(c)(8) to included ACA's suggested definitions for extreme high-gloss coating, pretreatment wash primer, and antifoulant sealer/tie coating. Because the commission is revising the rules to incorporate the suggested VOC limits, the commission does not agree it is also necessary to include the

averaging approach and extended compliance period that were suggested as alternative compliance options.

Comment

The EPA commented that the alternate control requirements proposed in §115.454(b) should be revised to make clear that any alternative requirements to §115.453(a)(1)(A), approved by the executive director, would need to be submitted as a site-specific SIP revision for approval by EPA to ensure it meets the requirements for enforceability and public hearings.

Response

The adopted alternate control requirement in §115.454(b) is identical to the existing SIP-approved requirement in §115.423(4), except that the rule citations reference the applicable process in the adopted new Division 5 rules. The commission notes that the rule citation in the proposed rules incorrectly referenced large appliance coating, and the commission is revising §115.454(b) to accurately reference miscellaneous metal parts and products surface coating processes in §115.453(a)(1)(C).

The commission agrees that any alternate control requirement approved by the executive director under §115.454(b) would need to be submitted as a

site-specific SIP revision for EPA approval. However, the commission does not agree that revisions to adopted §115.454(b) are warranted to clarify that EPA approval of alternate control requirements is necessary. The commission makes no change in response to this comment.

Industrial Cleaning Solvents

Comment

NASA and the US Navy commented that the rules in Chapter 115, Subchapter E, Division 1, were adopted in 1979 and need to be updated to reflect low-VOC and aqueous cleaning solvents. NASA and the US Navy suggested revising the industrial cleaning solvents rules to update or replace definitions and existing requirements for solvent degreasing processes in Division 1.

Response

The commission appreciates the comment. The processes regulated in Division 1 are not addressed in the EPA's 2006 Industrial Cleaning Solvents CTG applicability and are therefore not addressed in this rulemaking. The commission did not propose to amend the degreasing rules in Division 1 and therefore any changes to these rules are outside the scope of this rulemaking because affected sources were not provided the required opportunity to comment. The commission makes no change in response to

this comment.

Comment

TCC suggested clearly exempting cleaning operations that do not involve the removal of uncured adhesives, inks, and coatings, and contaminants such as dirt, soil, oil, and grease from the industrial cleaning solvents rule. TCC commented that these cleaning operations would likely already be regulated by the vent gas control or batch processes rules in Chapter 115.

Response

The exemption suggested by the commenter is not necessary. The cleaning operations described by the commenter would not meet the definition of a solvent cleaning operation in §115.460(b)(10) and, therefore, would not be subject to the industrial cleaning solvents rule requirements.

The commission reiterates that any solvent cleaning operation that is already subject to requirements in another division in Chapter 115 is exempt from Division 6. Additionally, as discussed elsewhere in this Response to Comments section, the commission is revising the rules to include an exemption for any cleaning operation that is controlled in accordance with the control requirements or emission specifications in

another Chapter 115 division. The commission makes no changes to the rules in response to this comment.

Comment

TCC commented that §115.461(b) should specifically exclude processes or operations that are subject to and complying with Chapter 115, Subchapter B, Division 2 or Division 6, including any qualifying exemptions. Specifically, TCC suggested revising §115.461(b) to exempt a cleaning operation from the requirements in Division 6 if all of the VOC emissions from the cleaning operation originate from a source for which another division within Chapter 115 has established a control requirement, emission specification, or exemption which applies to that VOC source category in that county.

Response

The commission agrees with TCC's suggestion to provide an exemption for cleaning operations that are controlled by emission specifications or control requirements established in another Chapter 115 division. As proposed, the rules for industrial cleaning solvents exempted cleaning operations subject to another division in Chapter 115 that establishes cleaning work practices or cleaning VOC limits used during a solvent cleaning operation. However, in light of this comment, the commission acknowledges that not all Chapter 115 rules contain cleaning requirements,

but that owners and operators of some processes may consider cleaning activities to be a part of the production process or may find it to be more efficient to control emissions from cleaning activities in accordance with the process control requirements or emissions specifications.

However, the commission declines to incorporate TCC's request to exempt a cleaning operation from this division if the cleaning VOC emissions originate from a source that qualifies for an exemption in another Chapter 115 division. Basing an exemption for a cleaning operation on a process-specific exemption in another Chapter 115 division, is inconsistent with the EPA's stated purpose that the CTG recommendations are intended to apply to all industrial cleaning operations that are not already subject to or complying with other control requirements.

Therefore, in response to this comment, the commission is adopting new §115.461(c) to exempt from this division a solvent cleaning operation where the process the cleaning operation is associated with is subject to another division in Chapter 115 and the VOC emissions from the solvent cleaning operation are controlled in accordance with an emission specification or control requirement of the division that the process is subject to. This exemption is intended to provide affected owners and operators with the

flexibility to comply with control requirements or emission specifications in another Chapter 115 rule to minimize compliance burden. The commission expects that an owner or operator choosing to comply with the control requirements or emission specifications for a cleaning operation is at least as effective as complying with the industrial cleaning solvent rule requirements.

Comment

TCC, NASA, and the US Navy commented that the term "janitorial cleaning" is defined in §115.460; however, there is no exemption for janitorial cleaning as recommended in the EPA's Industrial Cleaning Solvent CTG. NASA and the US Navy suggested excluding janitorial cleaning from the industrial cleaning solvents rule applicability. TCC suggested including an exemption in §115.461 for janitorial cleaning.

Response

The commission agrees that the EPA's 2006 CTG recommends excluding janitorial cleaning from the rule applicability. The exclusion was inadvertently left out at proposal, but the commission is revising the adopted rule applicability in §115.460(a) to exclude janitorial cleaning.

Comment

TCC claimed that the EPA's CTG intended to have broad applicability to industrial cleaning operations that have VOC emissions of at least 15 pounds per day, before controls. TCC added that the EPA suggested that cleaning of miscellaneous metal parts coating be excluded from applicability. TCC requested that the cleaning of miscellaneous metal parts in the petrochemical industry be exempt from the industrial cleaning solvents rule for these reasons.

Response

The commission disagrees with the commenter's interpretation of the EPA's 2006 CTG recommendation concerning the exclusion of specific source categories from the industrial cleaning solvents rule applicability. The EPA's 2006 CTG recommends that states exclude from the applicability, those industries relevant to the product categories listed for regulation under FCAA, §183(e), which includes miscellaneous metal and plastic parts coating. The EPA made this recommendation because the cleaning operations associated with the product categories listed under FCAA, §183(e) have been addressed elsewhere. Cleaning a part or product defined as a miscellaneous metal part or product, but not in any way related to the coating application, is not the intent of the EPA's 2006 CTG. Any solvent cleaning operation that is not associated with miscellaneous metal and

plastic parts coatings, or the categories listed for regulation under FCAA, §183(e) constitutes a cleaning activity that could potentially be subject to the industrial cleaning solvents rules in Division 6. The commission makes no change in response to this comment.

Comment

ACA requested the commission exempt resin manufacturing from the Chapter 115, Subchapter E, Division 6, industrial cleaning solvents rules since the proposed VOC limits would not allow effective cleaning of resin manufacturing equipment. ACA commented that both the BAAQMD and SCAQMD rules, which the EPA relied on to develop its CTG recommendations, exempt resin manufacturing operations from solvent cleaning VOC limits as follows: SCAQMD Rule 1171(g)(2)(E) exempts cleaning operations subject to Rule 1141 - Control of Volatile Organic Compound Emissions from Resin Manufacturing, and Rule 1141.1 - Coatings and Ink Manufacturing; and BAAQMD Regulation 8, Rule 4, Section 113 exempts operations that are subject to the requirements of other rules of Regulation 8, or which comply with appropriate limitations of those rules prior to the effective dates. ACA commented that since BAAQMD regulates resin manufacturing under Regulation 8, Rule 36, the BAAQMD solvent cleaning rule does not apply to resin manufacturing operations. As an alternative to completely exempting resin manufacturing operations from the Chapter 115 industrial cleaning solvents rules, ACA suggested implementing a VOC limit of 1.67 lb

VOC/gal solution, work practices, and an overall control efficiency of at least 80% or 90% if incineration is used.

Response

The commission agrees that requiring the resin manufacturing operations to comply with the 0.42 lb VOC/gal solution limit for cleaning solutions poses technical feasibility issues, as described in the commenter's formal comments and supporting documentation. The EPA's 2006 Industrial Cleaning Solvents CTG recommends excluding ink, adhesive, and coating manufacturing from the industrial cleaning solvents rule applicability because the 0.42 lb VOC/gal solution VOC content limit is not technologically and economically feasible for these manufacturing processes. The commission expects that the same technological and economic feasibility issues associated with manufacturing inks, coatings, and adhesives also exist for resin manufacturing. The VOC limit established in the industrial cleaning solvents rules prevent the use of adequate cleaning solutions, potentially causing cross contamination of manufactured products and poor product quality resulting in disposal of off-specification products. The 0.42 lb VOC/gal solution VOC content limit is not technologically feasible for resin manufacturing operations and therefore does not represent RACT for this industry. In response to this

comment, the commission is revising §115.461(d)(13) to exempt resin manufacturing from the VOC content limit for industrial cleaning solvents.

Miscellaneous Industrial Adhesives

Applicability and Definitions

Comment

NASA and the US Navy commented that the categories regulated in §115.473 are a number of substances that are more likely to be used for institutional purposes or at construction sites rather than in manufacturing facilities. NASA and the US Navy added that it is unclear how the rule will apply to these materials that are used at thousands of sites statewide that are not manufacturing facilities. The US Navy suggested exempting adhesives or adhesive primers used for general consumer or non-manufacturing applications from the requirements in Division 7. Additionally, NASA suggested exempting adhesives and adhesive primers that are subject to the National Volatile Organic Compound Emission Standards for Consumer Products, 40 CFR Part 59, Subpart Public, because the EPA states in the *Federal Register* notice for the Industrial Adhesive CTG (73 FR 40255) that the miscellaneous industrial adhesives category does not include materials that are subject to this rule.

Response

The commission is adopting the rules in Division 7 to implement the EPA's

2008 Miscellaneous Industrial Adhesives CTG recommendations. The commenter's requested exemption for the National Volatile Organic Compound Emission Standards for Consumer Products, 40 CFR Part 59, Subpart C from the Division 7 rules is unnecessary because these federal rules regulate the manufacturers and importers of consumer products, not the end-user of the products. Conversely, Division 7 applies to a subset of the consumer product end-user universe. Because aerosol adhesives and adhesive primers are regulated under the federal consumer products rules, the use of these materials is exempt under §115.471(b)(5) from the Division 7 VOC content limits, as recommended in the EPA's 2008 CTG. The commission makes no change in response to this comment.

However, in response to this comment the commission agrees that it is necessary to clarify the miscellaneous industrial adhesives rule applicability. In the final rule for the 2008 Miscellaneous Industrial Adhesives CTG (73 FR 58489), the EPA clearly states that the CTG recommendations are intended to only apply to the FCAA, §183(e) miscellaneous industrial adhesives product category, which only includes adhesives used at industrial manufacturing operations. In the final rule, the EPA also clearly states that the 2008 Miscellaneous Industrial Adhesives CTG recommendations do not include field applied adhesives (e.g., plastic

solvent welding cements used by plumbers to join plumbing pipes on construction jobs in the field). Therefore, in response to this comment, the commission is revising §115.470(a) to clarify the rules in Division 7 apply to manufacturing operations in the DFW and HGB areas that use adhesives for any of the adhesive application processes specified in the control requirements in §115.473(a); adhesives applied in the field (e.g., adhesives applied at construction jobs in the field) are not subject to this division. The revised rule applicability in §115.470(a) more accurately reflects the sources affected by the EPA's 2008 Miscellaneous Industrial Adhesives CTG and clarifies the Division 7 rule applicability for affected sources.

Comment

NASA commented that adhesives are applied to non-production mock-ups, prototypes, fixtures, and displays at manned spacecraft centers. NASA requested an exemption be added to §115.471 for adhesives or adhesive primers used on site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the Texas National Guard) and NASA. NASA requested the exemption because extensive field testing is required before adhesives can be approved for use and the proposed regulations would be impractical and extremely costly for NASA due to the complexity of adhesive operations, the number of adhesives used, and the number of different items and substrates bonded together.

Response

The rules in Division 7 are necessary to implement RACT for miscellaneous industrial adhesives as required in FCAA, §172(c)(1) and §182(b)(2). The commission disagrees that a complete exemption for NASA is consistent with the EPA's recommendations for this CTG emission source category. Granting the categorical exemption requested for NASA and other military organizations could potentially result in EPA disapproval of the Chapter 115 RACT rules and corresponding SIP revisions. The commission does not consider the adopted rules any less technologically or economically feasible for NASA and the US Navy as the rules are for other affected entities, which includes some small businesses.

The EPA's 2008 CTG is intended to apply to adhesive and adhesive primer application processes at manufacturing operations that are not already regulated. For purposes of the rules, a manufacturing operation refers to a manufacturer that uses adhesives to join surfaces in the assembly or construction of a product involving the application processes listed in §115.473(a). Accordingly, the adopted rules in Division 7 do not apply to adhesives and adhesive primers used in the application processes specified in §115.473(a) that are subject to another division in Chapter 115. For

example, owners and operators subject to the aerospace surface coating requirements in Division 2 qualify for the exemption in §115.471(c) because adhesives are regulated under the Division 2 aerospace rules. Additionally, the EPA's 2008 CTG explicitly states that the miscellaneous industrial adhesives rules are not intended to include adhesives that are addressed by CTG documents already issued for categories listed under FCAA, §183(e) or by an earlier CTG, which includes aerospace coatings. The commission makes no change in response to this comment.

Comment

TCC requested the other adhesive primers application process category be replaced with other adhesive primers, other than incidental industrial use. TCC based the exemption request on the expectation that chemical plants may use limited amounts of adhesives for various maintenance activities. TCC stated that although the adhesive use associated with these repairs is expected to be below the 3.0 tpy exemption threshold in §115.471, recordkeeping would still be required under §115.478(b).

Response

The adhesive use described by the commenter is beyond the scope of the miscellaneous industrial adhesives rule applicability. As discussed elsewhere in this Response to Comments section, the commission is

clarifying that the Division 7 rules apply to manufacturing operations using adhesives and adhesive primers for the adhesive application processes specified in §115.473(a). For purposes of the rules, a manufacturing operation refers to a manufacturer that uses adhesives to join surfaces in the assembly or construction of a product involving the application processes listed in §115.473(a). As discussed elsewhere in this Response to Comments section, the commission is revising the rule applicability in §115.470(a) to clearly indicate that adhesives applied in the field (e.g., adhesives applied at construction jobs in the field) are not subject to the Division 7 rules. Any source that does not qualify for an exemption in §115.471 and is considered a manufacturing operation is subject to and required to comply with the Division 7 rules. The commission makes no change in response to this comment.

SUBCHAPTER E: SOLVENT-USING PROCESSES
DIVISION 2: SURFACE COATING PROCESSES
§§115.422, 115.427, 115.429

Statutory Authority

The amendments are adopted under Texas Water Code (TWC), §5.102, concerning General Powers, that provides the commission with the general powers to carry out its duties under the TWC; TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC; TWC, §5.105, concerning General Policy, that authorizes the commission by rule to establish and approve all general policy of the commission; and under Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The amended sections are also adopted under THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; THSC, §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and THSC, §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the proper control of the state's air. The amended sections are also adopted under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, that authorizes the commission to prescribe reasonable requirements for the measuring and monitoring of air contaminant emissions and THSC, §382.021, concerning

Sampling Methods and Procedures, that authorizes the commission to prescribe the sampling methods and procedures to determine compliance with its rules. The amended sections are also adopted under Federal Clean Air Act (FCAA), 42 United States Code (USC), §§7401, *et seq.*, which requires states to submit state implementation plan revisions that specify the manner in which the National Ambient Air Quality Standards will be achieved and maintained within each air quality control region of the state.

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

§115.422. Control Requirements.

In the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), the following control requirements apply. [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 compounds [compound] (VOC) emissions during equipment cleanup by using [utilizing] the following procedures:

(A) install and operate a system that [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 20 degrees Celsius (68 degrees Fahrenheit) ~~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 must [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 may [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 may [shall] be used to prepare the booth prior to applying the booth coating.

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

(C) Conventional air spray guns may [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 kilogram [kilograms] of VOC per kilogram of solids (1.0 pound [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 must [shall] be pumped or drained into a normally closed container.

(E) Emissions from washoff operations must [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 must [shall] be conducted in a manner that minimizes spills.

(B) All containers, tanks, vats, drums, and piping systems must [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 must [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 must [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 must [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 five [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 that the United States Environmental Protection Agency (EPA) [for which EPA] has allocated essential use allowances or exemptions in 40 Code of Federal Regulations §82.4 (as amended through May 10, 1995 (60 FR 24986)), including any future amendments promulgated by the 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 must [shall] be removed and the enclosed cleaner must [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 must [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 must [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 shall [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 exemption limits in [provisions of] §115.427(a) of this title (relating to Exemptions) is [shall remain] subject to the provisions in §115.421(a) of this title, even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with §115.421(a) of this title and one of the following conditions is met. [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 [the] project that caused the [by which] throughput or emission rate to fall below the exemption limits in §115.427(a) of this title must be [was reduced is] authorized by a [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, the owner or operator shall continue to comply with §115.421(a) of this title [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 [if] authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide [owner/operator has given] the executive director 30 days [days'] notice of the project in writing.

(7) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, the owner or operator of a paper surface coating line subject

to this division shall implement the following work practices to limit VOC emissions from storage, mixing, and handling of cleaning and cleaning-related waste materials.

(A) All VOC-containing cleaning materials must be stored in closed containers.

(B) Mixing and storage containers used for VOC-containing materials must be kept closed at all times except when depositing or removing these materials.

(C) Spills of VOC-containing cleaning materials must be minimized.

(D) VOC-containing cleaning materials must be conveyed from one location to another in closed containers or pipes.

(E) VOC emissions from the cleaning of storage, mixing, and conveying equipment must be minimized.

§115.427. Exemptions.

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

(1) The following coating operations are exempt from §115.421(a)(9) of this title (relating to Emission Specifications):

(A) aerospace vehicles and components;

(B) vehicle refinishing (body shops), except as required by §115.421(a)(8)(B) and (C) of this title; and

(C) ships and offshore oil or gas drilling platforms, except as required by §115.421(a)(15) of this title.

(2) The following coating operations are exempt from §115.421(a)(10) of this title:

(A) the manufacture of exterior siding;

(B) tile board; or

(C) particle board used as a furniture component.

(3) The following exemptions apply to surface coating operations, except for vehicle refinishing (body shops) controlled by §115.421(a)(8)(B) and (C) of this title. Excluded from the volatile organic compounds [compound] (VOC) emission calculations are coatings and solvents used in surface coating activities that are not addressed by the surface coating categories of §115.421(a)(1) - (15) or §115.453 of this title (relating to Control Requirements). For example, architectural coatings (i.e., coatings that are applied in the field to stationary structures and their appurtenances, to portable buildings, to pavements, or to curbs) at a property would not be included in the calculations.

(A) Surface coating operations on a property that, when uncontrolled, will emit a combined weight of VOC of less than 3.0 [three] pounds per hour and 15 pounds in any consecutive 24-hour period are exempt from §115.421(a) of this title and §115.423 of this title (relating to Alternate Control Requirements).

(B) Surface coating operations on a property that, when uncontrolled, will emit a combined weight of VOC of less than 100 pounds in any consecutive 24-hour period are exempt from §115.421(a) and §115.423 of this title if

documentation is provided to and approved by both the executive director and the United States Environmental Protection Agency [EPA] to demonstrate that necessary coating performance criteria cannot be achieved with coatings that satisfy applicable emission specifications and that control equipment is not technically or economically feasible.

(C) Surface coating operations on a property for which total coating and solvent usage does not exceed 150 gallons in any consecutive 12-month period are exempt from §115.421(a) and §115.423 of this title.

(D) Mirror backing coating operations located on a property that, when uncontrolled, emit a combined weight of VOC less than 25 tons in one year (based on historical coating and solvent usage) are exempt from this division (relating to Surface Coating Processes).

(E) Wood furniture manufacturing facilities that are subject to and are complying with §115.421(a)(14) of this title and §115.422(3) of this title (relating to Control Requirements) are exempt from §115.421(a)(13) of this title. These wood furniture manufacturing facilities must continue to comply with §115.421(a)(13) of this title until these facilities are in compliance with §115.421(a)(14) and §115.422(3) of this title.

(F) Wood furniture manufacturing facilities that, when uncontrolled, emit a combined weight of VOC from wood furniture manufacturing operations less than 25 tons per year are exempt from §115.421(a)(14) and §115.422(3) of this title.

(G) Wood parts and products coating facilities in Hardin, Jefferson, and Orange Counties are exempt from §115.421(a)(13) of this title.

(H) Shipbuilding and ship repair operations in Hardin, Jefferson, and Orange Counties that, when uncontrolled, emit a combined weight of VOC from ship and offshore oil or gas drilling platform surface coating operations less than 50 tons per year are exempt from §115.421(a)(15) and §115.422(4) of this title.

(I) Shipbuilding and ship repair operations in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties that, when uncontrolled, emit a combined weight of VOC from ship and offshore oil or gas drilling platform surface coating operations less than 25 tons per year are exempt from §115.421(a)(15) and §115.422(4) of this title.

(J) The following activities where cleaning and coating of aerospace vehicles or components may take place are exempt from this division: research and development, quality control, laboratory testing, and electronic parts and assemblies, except for cleaning and coating of completed assemblies.

(4) Vehicle refinishing (body shops) in Hardin, Jefferson, and Orange Counties are exempt from §115.421(a)(8)(B) and §115.422(1) and (2) of this title.

(5) The coating of vehicles at in-house (fleet) vehicle refinishing operations and the coating of vehicles by private individuals are exempt from §115.421(a)(8)(B) and §115.422(1) and (2) of this title. This exemption is not applicable if the coating of a vehicle by a private individual occurs at a commercial operation.

(6) Aerosol coatings (spray paint) are exempt from this division.

(7) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, ~~as defined in §115.10 of this title (relating to Definitions),~~ the following surface coating categories that are subject to the requirements of Chapter 115, Subchapter E, Division 5 of this title (relating to Control Requirements for Surface Coating Processes) are exempt from the requirements in this division:

(A) large appliance coating;

(B) metal furniture coating;

(C) miscellaneous metal parts and products coating;

(D) each paper coating line with the potential to emit equal to or greater than 25 tons per year of VOC from all coatings applied; and

(E) automobile and light-duty truck manufacturing coating.

(8) In the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, the re-coating of used miscellaneous metal parts and products at a designated on-site maintenance shop that was exempt from §115.421(a)(9) of this title prior to January 1, 2012, or that begins operation on or after January 1, 2012, is exempt from all requirements in this division. The re-coating of used miscellaneous metal parts and products at a designated on-site maintenance shop that was subject to §115.421(a)(9) of this title prior to January 1, 2012, remains subject to this division. For purposes of this exemption, a designated on-site maintenance shop is an area at a site where used miscellaneous metal parts or products are re-coated on a routine basis.

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

(1) Surface coating operations located at any property that, when uncontrolled, will emit a combined weight of VOC less than 550 pounds (249.5 kilograms [kg]) in any continuous 24-hour period are exempt from §115.421(b) of this title. Excluded from this calculation are coatings and solvents used in surface coating activities that are not addressed by the surface coating categories of §115.421(b)(1) - (10) of this title. For example, architectural coatings (i.e., coatings that are applied in the field to stationary structures and their appurtenances, to portable buildings, to pavements, or to curbs) at a property would not be included in the calculation.

(2) The following coating operations are exempt from §115.421(b)(8) of this title:

(A) aerospace vehicles and components;

(B) vehicle refinishing (body shops); and

(C) ships and offshore oil or gas drilling platforms.

(3) The following coating operations are exempt from §115.421(b)(9) of this title:

(A) the manufacture of exterior siding;

(B) tile board; or

(C) particle board used as a furniture component.

(4) Aerosol coatings (spray paint) are exempt from this division.

§115.429. Counties and Compliance Schedules.

(a) The owner or operator of each surface coating operation in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Gregg, Hardin, Harris, Jefferson, Liberty, Montgomery, Nueces, Orange, Tarrant, Victoria, and Waller Counties shall continue to comply with this division ~~(relating to Surface Coating Processes)~~ as required by §115.930 of this title (relating to Compliance Dates).

(b) In ~~The owner or operator of each surface coating operation in~~ Ellis, Johnson, Kaufman, Parker, and Rockwall Counties the compliance date has already passed and

the owner or operator of each surface coating operation shall continue to comply with this division. ~~shall comply with this division as soon as practicable, but no later than June 15, 2007.~~

(c) In ~~The owner or operator of each shipbuilding and ship repair operation in~~ Hardin, Jefferson, and Orange Counties the compliance date has already passed and the owner or operator of each shipbuilding and ship repair operation that, when uncontrolled, emits a combined weight of volatile organic compounds from ship and offshore oil or gas drilling platform surface coating operations equal to or greater than 50 tons per year and less than 100 tons per year shall continue to comply with this division ~~as soon as practicable, but no later than December 31, 2006~~.

(d) The owner or operator of a paper surface coating process located in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), shall comply with the requirements in §115.422(7) of this title (relating to Control Requirements), no later than March 1, 2013.

SUBCHAPTER E: SOLVENT-USING PROCESSES
DIVISION 3: FLEXOGRAPHIC AND ROTOGRAVURE PRINTING
§§115.430, 115.431, 115.432, 115.433, 115.435, 115.436, 115.439

Statutory Authority

The amendments and new section are adopted under Texas Water Code (TWC), §5.102, concerning General Powers, that provides the commission with the general powers to carry out its duties under the TWC; TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC; TWC, §5.105, concerning General Policy, that authorizes the commission by rule to establish and approve all general policy of the commission; and under Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The new and amended sections are also adopted under THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; THSC, §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and ,THSC, §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the proper control of the state's air. The new and amended sections are also adopted under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, that authorizes the commission to prescribe reasonable requirements for the measuring and monitoring of air contaminant emissions and

THSC, §382.021, concerning Sampling Methods and Procedures, that authorizes the commission to prescribe the sampling methods and procedures to determine compliance with its rules. The new and amended sections are also adopted under Federal Clean Air Act (FCAA), 42 United States Code (USC), §§7401, *et seq*., which requires states to submit state implementation plan revisions that specify the manner in which the National Ambient Air Quality Standards will be achieved and maintained within each air quality control region of the state.

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

§115.430. Applicability and Definitions. [Flexographic and Rotogravure Printing Definitions.]

(a) Applicability. The requirements in this division apply to the following flexographic and rotogravure printing processes in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), and in Gregg, Nueces, and Victoria Counties: [The following words and 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 of this title (relating to Definitions),

§101.1 of this title (relating to Definitions), and §3.2 of this title (relating to Definitions).]

(1) packaging rotogravure printing lines;

(2) publication rotogravure printing lines;

(3) flexographic printing lines; and

(4) flexible package printing lines.

(b) Definitions. Unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10 of this title (relating to Definitions ~~respectively~~), the terms in this division have the meanings commonly used in the field of air pollution control. In addition, the following meanings apply in this division unless the context clearly indicates otherwise.

(1) **Cleaning operation**--The cleaning of a press, press parts, or removing dried ink from areas around a press. A cleaning operation does not include cleaning electronic components of a press; cleaning in pre-press (e.g., platemaking) or

post-press (e.g., binding) operations; the use of janitorial supplies (e.g., detergents or floor cleaners) to clean areas around a press; and parts washers or cold cleaners.

(2) ~~(1)~~ **Daily weighted average**--The total weight of volatile organic compounds (VOC) emissions from all materials ~~inks and coatings~~ subject to the same VOC content limit in §115.432 of this title (relating to Control Requirements)~~,~~ divided by the total volume or weight of those materials (minus water and exempt solvent), where applicable, or divided by the total volume or weight of solids~~,~~ applied to each printing line per day.

(3) ~~(2)~~ **Flexible package printing**--Flexographic or rotogravure printing on any package or part of a package the shape of which can be readily changed including, but not limited to, bags, pouches, liners, and wraps using paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials.

(4) ~~(3)~~ [(1)] **Flexographic printing** [process]--A method of printing in which the image areas are raised above the non-image areas, and the image carrier is made of an elastomeric material.

(5) ~~(4)~~ [(2)] **Packaging rotogravure printing**--Any rotogravure printing on [upon] paper, paper board, metal foil, plastic film, or any other substrate that [which] is, in subsequent operations, formed into packaging products or labels.

(6) ~~(5)~~ [(3)] **Publication rotogravure printing**--Any rotogravure printing on [upon] paper that [which] is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, or other types of printed materials.

(7) ~~(6)~~ [(4)] **Rotogravure printing**--The application of words, designs, or [and/or] pictures to any substrate by means of a roll printing technique that [which] involves a recessed image area. The recessed area is loaded with ink and pressed directly to the substrate for image transfer.

§115.431. Exemptions.

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

(1) In the Beaumont-Port Arthur, Dallas-Fort Worth, and El Paso areas, all rotogravure and flexographic printing lines on a property that, when uncontrolled, have a maximum potential to emit a combined weight of volatile organic compounds (VOC) less than 50 tons per year (based on historical ink and VOC solvent usage, and at maximum production capacity) are exempt from the requirements in §115.432(a) of this title (relating to Control Requirements).

(2) In the Houston-Galveston-Brazoria area, all rotogravure and flexographic printing lines on a property that, when uncontrolled, have a maximum potential to emit a combined weight of VOC less than 25 tons per year (based on historical ink and VOC solvent usage, and at maximum production capacity) are exempt from the requirements in §115.432(a) of this title.

(3) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, all flexible package printing lines located on a property that have a combined weight of total actual VOC emissions less than 3.0 tons per year from all coatings, as defined in §101.1 of this title (relating to Definitions), and all associated cleaning operations are exempt from the requirements in §115.432(c) and (d) of this title.

(4) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, each flexible package printing line that, when uncontrolled, has a maximum potential to emit total VOC emissions less than 25 tons per year from all coatings is exempt from the requirements in §115.432(c) of this title.

(b) In Gregg, Nueces, and Victoria Counties, all rotogravure and flexographic printing lines on a property that, when uncontrolled, emit a combined weight of VOC less than 100 tons per year (based on historical ink and VOC solvent usage) are exempt from the requirements in §115.432(b) of this title.

§115.432. Control Requirements.

(a) In the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, [For 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 control requirements [shall] apply. Beginning March 1, 2013, this subsection no longer applies to flexible package printing lines in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas that are required to comply with the requirements in subsection (c) of this section.

(1) The owner or operator shall limit the volatile organic compounds (VOC) emissions from solvent-containing ink used on each packaging rotogravure, publication rotogravure, flexible package, and flexographic printing line by using one of the following options. [No person shall operate or allow the operation of a packaging rotogravure, publication rotogravure, or flexographic printing line that uses solvent-containing ink unless volatile organic compound (VOC) emissions are limited by one of the following:]

(A) The owner or operator shall apply [application to the substrate of] low solvent ink with a volatile fraction containing 25% by volume or less of VOC solvent and 75% by volume or more of water and exempt solvent. [;]

(B) The owner or operator shall apply [application to the substrate of] high solids solvent-borne ink containing 60% by volume or more of nonvolatile material (minus water and exempt solvent). [; or]

(C) The owner or operator shall operate [operation of] a vapor control system to reduce the VOC emissions from an effective capture system by at least 90% by weight. The design and operation of the capture system for each printing line must be consistent with good engineering practice and must achieve [shall be required to provide for] an overall control efficiency [reduction in VOC emissions], as

demonstrated to the satisfaction of the executive director, upon request, of at least the following weight percentages:

(i) 75% for a publication rotogravure process;

(ii) 65% for a packaging rotogravure process; [or]

(iii) 60% for a flexographic printing process; or [.]

(iv) for a flexible package printing process, the overall control efficiency in clause (ii) or (iii) of this subparagraph, depending on the type of press used.

(2) A flexographic and rotogravure printing line ~~lines~~ that becomes [Any graphic arts facility that becomes] subject to paragraph (1) [the provisions of paragraph (1)(A), (B), or (C)] of this subsection by exceeding the exemption limits in §115.431(a) [provisions of §115.437(a)] of this title (relating to Exemptions) is [will remain] subject to the provisions of this subsection[,] even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with paragraph (1) of this subsection and one of the following conditions is met. [and until emissions are reduced to no more than the

controlled emissions level existing prior to implementation of the project by which throughput or emission rate was reduced to less than the applicable exemption limits in §115.437(a) of this title and:]

(A) The [the] project that caused the [by which] throughput or emission rate to fall below the exemption limits in §115.431(a) of this title must be [was reduced is] authorized by a permit, permit amendment, [any permit or permit amendment or] standard permit, or permit by rule required by Chapter 116 of this title (relating to Control of Air Pollution by Permit for New Construction or Modification) or Chapter 106 of this title (relating to Permits by Rule). If a permit by rule is available for the project, the owner or operator shall continue to comply with paragraph (1) of this subsection [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 [if] authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide [owner/operator has given] the executive director 30 days [days'] notice of the project in writing.

(3) Any capture efficiency testing of the capture system must be conducted in accordance with §115.435(a) of this title (relating to Testing Requirements).

(b) In Gregg, Nueces, and Victoria Counties, the owner or operator shall limit the VOC emissions from solvent-containing ink used on each packaging rotogravure, publication rotogravure, flexible package, and flexographic printing line by using one of the following options. [For Gregg, Nueces, and Victoria Counties, no person shall operate or allow the operation of a packaging rotogravure, publication rotogravure, or flexographic printing line that uses solvent-containing ink, unless VOC emissions are limited by one of the following:]

(1) The owner or operator shall apply [application to the substrate of] low solvent ink with a volatile fraction containing 25% by volume or less of VOC solvent and 75% by volume or more of water and exempt solvent. [;]

(2) The owner or operator shall apply [application to the substrate of] high solids solvent-borne ink containing 60% by volume or more of nonvolatile material (minus water and exempt solvent). [; or]

(3) The owner or operator shall operate [operation of] a vapor control system to reduce the VOC emissions from an effective capture system by at least 90% by weight. The design and operation of the capture system for each printing line must be consistent with good engineering practice and must achieve [shall be required to provide

for] an overall control efficiency [reduction in VOC emissions], as demonstrated to the satisfaction of the executive director, upon request, of at least the following weight percentages:

(A) 75% for a publication rotogravure process;

(B) 65% for a packaging rotogravure process; [or]

(C) 60% for a flexographic printing process; or [.]

(D) for a flexible package printing process, the overall control efficiency in subparagraph (B) or (C) of this paragraph, depending on the type of press used.

(c) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, the following control requirements apply to each flexible package printing line.

(1) The owner or operator shall limit the VOC emissions from coatings, as defined in §101.1 of this title (relating to Definitions), applied on each flexible package printing line by using one of the following options. These limits are based on the daily

weighted average, as defined in §115.430(b) of this title (relating to Applicability and Definitions).

(A) The owner or operator shall limit the VOC emissions from ~~content of~~ the coatings to 0.80 ~~0.8~~ pound of VOC per pound of solids applied. The VOC emission ~~content~~ limit can be met through the use of low-VOC coatings ~~materials~~ or a combination of coatings ~~low-VOC materials~~ and the operation of a vapor control system.

(B) The owner or operator shall limit the VOC emissions from ~~content of~~ the coatings to 0.16 pound of VOC per pound of coating ~~materials~~ applied. The VOC emission ~~content~~ limit can be met through the use of low-VOC coatings ~~materials~~ or a combination of coatings ~~low-VOC materials~~ and the operation of a vapor control system.

(C) The owner or operator shall operate a vapor control system that achieves an overall control efficiency of at least 80% by weight.

(2) A flexographic and rotogravure printing line that becomes ~~become~~ subject to paragraph (1) of this subsection by exceeding ~~of~~ the exemption limits in §115.431(a) of this title is subject to paragraph (1) of this subsection even if throughput or emissions later fall below exemption limits unless emissions are maintained at or

below the controlled emissions level achieved while complying with paragraph (1) of this subsection and one of the following conditions is met.

(A) The project that caused the throughput or emission rate to fall below the exemption limits in §115.431(a) of this title must be authorized by a permit, permit amendment, standard permit, or permit by rule required by Chapter 116 of this title or Chapter 106 of this title. If a permit by rule is available for the project, the owner or operator shall continue to comply with paragraph (1) of this subsection for 30 days after the filing of documentation of compliance with that permit by rule.

(B) If authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

(3) An owner or operator applying ~~low-VOC~~ coatings in combination with a vapor control system to meet the VOC emission limits in paragraph (1)(A) or (B) of this subsection shall use the following equation to determine the minimum overall control efficiency necessary to demonstrate equivalency. Control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.435(a) of this title.

Figure: 30 TAC §115.432(c)(3)

~~Figure: 30 TAC §115.432(c)(3)~~

$$E = \frac{(VOC - S)}{VOC}$$

Where:
E = The required overall control efficiency, decimal fraction.
VOC = The volatile organic compounds (VOC) content of the coatings applied ~~used~~ on the printing line expressed in units consistent with the VOC limit in paragraph (1)(A) or (B) of this subsection ~~on a pounds of VOC per pound gallon of solids basis.~~ The owner or operator may choose to use either a daily weighted average or the maximum VOC content.
S = The applicable VOC limit in paragraph (1)(A) or (B) of this subsection. The units for this variable and the VOC variable must be the same. ~~The applicable VOC emission limit on a pounds of VOC per gallon of solids basis calculated using Equation 1 in Figure: 30 TAC §115.473(a)(3).~~

(d) The owner or operator of a flexible package printing process shall implement the following work practices for cleaning materials:

(1) keep all cleaning solvents and used shop towels in closed containers; and

(2) convey cleaning solvents from one location to another in closed containers or pipes.

§115.433. Alternate Control Requirements.

[(a)] For the owner or operator of a flexographic or rotogravure printing line subject to this division, [For all affected 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 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.

[(b) For all affected persons in Gregg, Nueces, and Victoria Counties, 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.]

§115.435. Testing Requirements.

(a) In the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), [For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas,] compliance with the control requirements in §115.432 of this title (relating to Control Requirements) must [shall] be determined by applying the following test methods, as appropriate:

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

(2) [Test] Method 24 (40 CFR Part 60, Appendix A) for determining the volatile organic compounds [compound] (VOC) content and density of printing inks and related coatings;

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

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

(5) the United States Environmental Protection Agency (EPA) [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;

(6) additional performance test procedures described in 40 CFR §60.444 (as amended through October 18, 1983 (48 FR 48375));

(7) minor modifications to these methods and procedures approved by the executive director; and

(8) [(7)] for the capture efficiency, the [which shall be measured using] applicable procedures outlined in 40 CFR [, Part] §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; Procedure F.2 - Fugitive VOC Emissions from Building Enclosures.

(A) The following [are] exemptions apply to capture efficiency testing requirements.

(i) If a source installs a permanent total enclosure [(PTE)] that [which] meets the specifications of Procedure T and that [which] directs all VOC to a control device, then the capture efficiency is assumed to be 100%, and the source is exempt [exempted] from capture efficiency testing requirements. This does not exempt the source from performance of any control device efficiency testing that may be required. In addition, a source must demonstrate all criteria for a permanent total enclosure [PTE] are met during testing for control efficiency.

(ii) If a source uses a control device designed to collect and recover VOC (e.g., carbon adsorption system), an explicit measurement of capture efficiency is not necessary if the following conditions are met. The overall control of the system can be determined by directly comparing the input liquid VOC to the recovered liquid VOC. The general procedure for use in this situation is given in 40 CFR §60.433 (as amended through October 17, 2000 (65 FR 61761)) with the following additional restrictions.

(I) The source must be able to equate solvent usage with solvent recovery on a 24-hour (daily) basis, rather than a 30-day weighted average. This verification must be done within 72 hours following each 24-hour period of the 30-

day period specified in 40 CFR §60.433 (as amended through October 17, 2000 (65 FR 61761)).

(II) The solvent recovery system (i.e., capture and control system) must be dedicated to a single process line (e.g., one process line venting to a carbon adsorption system); or if the solvent recovery system controls multiple process lines, the source must be able to demonstrate that the overall control (i.e., the total recovered solvent VOC divided by the sum of liquid VOC input to all process lines venting to the control system) meets or exceeds the most stringent standard applicable for any process line venting to the control system.

(B) The capture efficiency must [shall] be calculated using one of the following four protocols referenced. The owner or operator of any [Any] affected source shall [must] use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the EPA.

(i) Gas/gas method using temporary total enclosure (TTE). The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The following equation must be used to determine the capture efficiency for this protocol. [The capture efficiency equation to be used for this protocol is: CE = Gw / (Gw + Fw), where: CE = capture efficiency, decimal fraction; Gw = mass of

VOC captured and delivered to control device using a TTE (use Procedure G.2); Fw = mass of fugitive VOC that escapes from a TTE (use Procedure F.1).]

Figure: 30 TAC §115.435(a)(8)(B)(i)

$$CE = \frac{G_W}{(G_W + F_W)}$$

Where:
CE = The capture efficiency, decimal fraction.
G_W = The mass of volatile organic compounds (VOC) captured and delivered to control device using a temporary total enclosure (TTE) (use Procedure G.2).
F_W = The mass of fugitive VOC that escapes from a TTE (use Procedure F.1).

(ii) Liquid/gas method using TTE. The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The following equation must be used to determine the capture efficiency for this protocol. [The capture efficiency equation to be used for this protocol is: CE = (L - F) / L, where: CE = capture efficiency, decimal fraction; L = mass of liquid VOC input to process (use Procedure L); F = mass of fugitive VOC that escapes from a TTE (use Procedure F.1).]

Figure: 30 TAC §115.435(a)(8)(B)(ii)

$$CE = \frac{(L - F)}{L}$$

Where:
CE = The capture efficiency, decimal fraction.
L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).
F = The mass of fugitive VOC that escapes from a temporary total enclosure (TTE) (use Procedure F.1).

(iii) Gas/gas method using the building or room enclosure (BE) in which the affected source is located [as the enclosure (BE)] and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from building enclosure [G and F] are measured while operating only the affected facility. All fans and blowers in the BE must be operating as they would under normal production. The following equation must be used to determine the capture efficiency for this protocol. [The capture efficiency equation to be used for this protocol is: CE = G / (G + Fb), where: CE = capture efficiency, decimal fraction; G = mass of VOC captured and delivered to a control device (use Procedure G.2); Fb = mass of fugitive VOC that escapes from building enclosure (use Procedure F.2).]

Figure: 30 TAC §115.435(a)(8)(B)(iii)

$$CE = \frac{G}{(G + F_B)}$$

Where:
CE = The capture efficiency, decimal fraction.
G = The mass of volatile organic compounds (VOC) captured and delivered to a control device (use Procedure G.2).
F_B = The mass of fugitive VOC that escapes from building enclosure (use Procedure F.2).

(iv) Liquid/gas method using a BE in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from BE [L and F] are measured while operating only the affected facility. All fans and blowers in the BE [building or room] must be operated as they would under normal production. The following equation must be used to determine the capture efficiency for this protocol. [The capture efficiency equation to be used for this protocol is: [CE = (L - Fb) / L, where: CE = capture efficiency, decimal fraction; L = mass of liquid VOC input to process (use Procedure L); Fb = mass of fugitive VOC that escapes from BE (use Procedure F.2)].]

Figure: 30 TAC §115.435(a)(8)(B)(iv)

$$CE = \frac{L}{F_B - L}$$

Where:
CE = The capture efficiency, decimal fraction.
L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).

F_B = The mass of fugitive VOC that escapes from a building or room enclosure (use Procedure F.2).

(C) The operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.436(a) of this title (relating to Monitoring and Recordkeeping Requirements) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. The executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test. [The following conditions must be met in measuring capture efficiency.]

[(i) Any error margin associated with a test protocol may not be incorporated into the results of a capture efficiency test.]

[(ii) All affected facilities shall accomplish the initial capture efficiency testing by July 31, 1992, in Brazoria, Dallas, El Paso, Galveston, Harris, Jefferson, Orange, and Tarrant Counties, and by July 31, 1993, in Chambers, Collin, Denton, Fort Bend, Hardin, Liberty, Montgomery, and Waller Counties.]

[(iii) During an initial pretest meeting, the executive director and the source owner or operator shall identify those operating parameters which shall be monitored to ensure that capture efficiency does not change significantly over time.

These parameters shall be monitored and recorded initially during the capture efficiency testing and thereafter during facility operation. The executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test; and]

[(8) minor modifications to these test methods and procedures approved by the executive director.]

(b) In [For] Gregg, Nueces, and Victoria Counties, compliance with the requirements in this division must [shall] be determined by applying the following test methods, as appropriate:

(1) Methods 1 - 4 [Test Methods 1-4] (40 CFR Part 60, Appendix A) for determining flow rates, as necessary;

(2) [Test] Method 24 (40 CFR Part 60, Appendix A) for determining the VOC content and density of printing inks and related coatings;

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

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

(5) the 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;

(6) additional performance test procedures described in 40 CFR §60.444 (as amended through October 18, 1983 (48 FR 48375)); or

(7) minor modifications to these test methods and procedures approved by the executive director.

(c) Methods other than those specified in subsections (a)(1) - (6) and (b)(1) - (6) of this section may be used if approved by the executive director and validated using Method 301 (40 CFR Part 63, Appendix A). For the purposes of this subsection, substitute "executive director" each place that Method 301 references "administrator."

§115.436. Monitoring and Recordkeeping Requirements.

(a) In the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), the owner or operator of a rotogravure or flexographic printing line subject to this division shall: [For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the owner or operator of any rotogravure or flexographic printing facility shall:]

(1) maintain records of the volatile organic compounds [compound] (VOC) content of all inks as applied to the substrate. Additionally, records of the quantity of each ink and solvent used must [shall] be maintained. The composition of inks may be determined by the methods referenced in §115.435(a) of this title (relating to Testing Requirements) or by examining the manufacturer's formulation data and the amount of dilution solvent added to adjust the viscosity of inks prior to application to the substrate;

(2) maintain daily records of the quantity of each ink and solvent used at a facility subject to the requirements of an alternate means of control approved by the executive director in accordance with §115.433 [§115.433(a)] of this title (relating to Alternate Control Requirements) that [which] allows the application of inks exceeding the applicable control limits. Such records must be sufficient to demonstrate compliance with the applicable emission limitation on a daily weighted average;

(3) 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 of direct-flame incinerators <u>or</u> [and/or] gas temperature immediately upstream and downstream of any catalyst bed;

(B) the total amount of VOC recovered by a carbon adsorption or other solvent recovery system during a calendar month;

(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; and

(D) the dates and reasons for any maintenance and repair of the required control devices and the estimated quantity and duration of VOC emissions during such activities;

(4) maintain the results of any testing conducted at an affected facility in accordance with the provisions specified in §115.435(a) of this title [(relating to Testing Requirements)];

(5) maintain all records at the affected facility for at least two years and make such records available upon request to authorized representatives of the executive director, the United States Environmental Protection Agency (EPA), or any [EPA, or the] local air pollution agency with [having] jurisdiction [in the area]; and

(6) maintain on file the capture efficiency protocol submitted under §115.435(a)(8) [§115.435(a)(7)] of this title [(relating to Testing Requirements)]. The owner or operator shall submit all results of the test methods and capture efficiency protocols to the executive director within 60 days of the actual test date. The source owner or operator shall maintain records of the capture efficiency operating parameter values on-site for a minimum of one year. If any changes are made to capture or control equipment, the owner or operator is required to notify the executive director in writing within 30 days of these changes, and a new capture efficiency or [and/or] control device destruction or removal efficiency test may be required.

(b) In [For] Gregg, Nueces, and Victoria Counties, the owner or operator of any rotogravure or flexographic printing line [facility] shall:

(1) maintain records of the VOC content of all inks as applied to the substrate. Additionally, records of the quantity of each ink and solvent used must [shall] be maintained. The composition of inks may be determined by the methods referenced in §115.435(b) of this title [(relating to Testing Requirements)] or by examining the manufacturer's formulation data and the amount of dilution solvent added to adjust the viscosity of inks prior to application to the substrate;

(2) maintain daily records of the quantity of each ink and solvent used at a facility subject to the requirements of an alternate means of control approved by the executive director in accordance with §115.433 [§115.433(b)] of this title that [(relating to Alternate Control Requirements) which] allows the application of inks exceeding the applicable control limits. Such records must be sufficient to demonstrate compliance with the applicable emission limitation on a daily weighted average;

(3) 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 of direct-flame incinerators or [and/or] the gas temperature immediately upstream and downstream of any catalyst bed;

(B) the total amount of VOC recovered by a carbon adsorption or other solvent recovery system during a calendar month;

(C) in Victoria County, 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; and

(D) the dates and reasons for any maintenance and repair of the required control devices and the estimated quantity and duration of VOC emissions during such activities;

(4) maintain the results of any testing conducted at an affected facility in accordance with the provisions specified in §115.435(b) of this title [(relating to Testing Requirements)]; and

(5) maintain all records at the affected facility for at least two years and make such records available upon request to authorized representatives of the executive

director, the EPA, or any [EPA, or the] local air pollution agency with [having] jurisdiction [in the area].

(c) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, the owner or operator of a flexible package printing line subject to this division shall comply with the following monitoring and recordkeeping requirements.

(1) The owner or operator shall maintain records of the VOC content of all coatings, as defined in §101.1 of this title (relating to Definitions), as applied to the substrate. The composition of coatings may be determined by the methods referenced in §115.435(a) of this title or by examining the manufacturer's formulation data and the amount of dilution solvent added to adjust the viscosity of coatings prior to application to the substrate. Additionally, records of the quantity of each coating used must be maintained.

(2) For flexible package printing lines subject to the control requirements in §115.432(c) of this title (relating to Control Requirements), the ~~The~~ owner or operator shall maintain records of the quantity and type of each coating and solvent consumed if any of the coatings, as applied, exceed the applicable VOC content or emission limits in §115.432(c) of this title ~~(relating to Control Requirements)~~. Records must be sufficient to

demonstrate compliance with the applicable VOC content or emission limit on a daily weighted average.

(3) For flexible package printing lines subject to the control requirements in §115.432(a) of this title, the owner or operator shall maintain daily records of the quantity of each ink and solvent used at a facility subject to the requirements of an alternate means of control approved by the executive director in accordance with §115.433 of this title that allows the application of inks exceeding the applicable control limits. Such records must be sufficient to demonstrate compliance with the applicable emission limitation in §115.432(a) of this title on a daily weighted average.

(4) ~~(3)~~ The owner or operator shall install and maintain monitors to continuously measure and record operational parameters of any control device installed to meet applicable control requirements in §115.432(a) or (c) ~~§115.432(c)~~ of this title. 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 or gas temperature immediately upstream and downstream of any catalyst bed;

(B) the total amount of VOC recovered by a carbon adsorption or other solvent recovery system during a calendar month;

(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; and

(D) the dates and reasons for any maintenance and repair of the required control devices and the estimated quantity and duration of VOC emissions during such activities.

(5) ~~(4)~~ The owner or operator shall maintain the results of any testing conducted at an affected facility in accordance with the provisions specified in §115.435(a) of this title.

(6) ~~(5)~~ The owner or operator shall maintain all records at the affected facility for at least two years and make such records available upon request to authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction.

(7) ~~(6)~~ The owner or operator shall maintain on file the capture efficiency protocol submitted under §115.435(a)(8) of this title. The owner or operator shall submit all results of the test methods and capture efficiency protocols to the executive director within 60 days of the actual test date. The source owner or operator shall maintain records of the capture efficiency operating parameter values on-site for a minimum of one year. If any changes are made to capture or control equipment, the owner or operator is required to notify the executive director in writing within 30 days of these changes, and a new capture efficiency or control device destruction or removal efficiency test may be required.

§115.439. Counties and Compliance Schedules.

(a) Except as specified in subsection (c) and (d) of this section, for the owner or operator of a flexographic or rotogravure printing line subject to this division [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 the compliance date has already passed and the owner or operator shall continue to comply with applicable sections of this division [(relating to Flexographic and Rotogravure Printing) as required by §115.930 of this title (relating to Compliance Dates)].

(b) Except as specified in subsection (c) and (d) of this section, ~~the owner or operator of a flexographic or rotogravure printing line subject to this division~~ [All affected persons] in Ellis, Johnson, Kaufman, Parker, and Rockwall Counties the compliance date has already passed and the owner or operator of a flexographic or rotogravure printing line subject to this division shall continue to comply with this division. ~~shall comply with this division as soon as practicable, but no later than March 1, 2009.~~

(c) The owner or operator of a flexible package printing line in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), shall comply with the requirements in §115.432(c) and (d) and §115.436(c) of this title (relating to Control Requirements; and Monitoring and Recordkeeping Requirements) no later than March 1, 2013. Testing required by §115.435 of this title (relating to Testing Requirements) to demonstrate compliance with the requirements of §115.432(c) of this title must be completed, and the results submitted to the executive director no later than March 1, 2013.

(d) The owner or operator of a flexible package printing line in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas that becomes subject to the requirements of this division after March 1, 2013, shall comply with the requirements in this division no later than 60 days after becoming subject.

SUBCHAPTER E: SOLVENT-USING PROCESSES
DIVISION 3: FLEXOGRAPHIC AND ROTOGRAVURE PRINTING
[§115.437]

Statutory Authority

The repealed section is adopted under Texas Water Code (TWC), §5.102, concerning General Powers, that provides the commission with the general powers to carry out its duties under the TWC; TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC; TWC, §5.105, concerning General Policy, that authorizes the commission by rule to establish and approve all general policy of the commission; and under Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The repealed section is also adopted under THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; THSC, §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and THSC, §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the proper control of the state's air. The repealed section is also proposed under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, that authorizes the commission to prescribe reasonable requirements for the measuring and monitoring of air contaminant emissions. The repealed section is also adopted under

Federal Clean Air Act (FCAA), 42 United States Code (USC), §§7401, *et seq*., which requires states to submit state implementation plan revisions that specify the manner in which the National Ambient Air Quality Standards will be achieved and maintained within each air quality control region of the state.

The repeal implements THSC, §§382.002, 382.011, 382.012, and 382.016, 382.017; and FCAA, 42 USC, §§7401 *et seq*.

[§115.437. Exemptions.]

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

[(1) In the Beaumont/Port Arthur, Dallas/Fort Worth, and El Paso areas, all rotogravure and flexographic facilities on a property which, when uncontrolled, have a maximum potential to emit a combined weight of volatile organic compounds (VOC) less than 50 tons in one year (based on historical ink and VOC solvent usage, and at maximum production capacity) are exempt from the requirements of §115.432(a) of this title (relating to Control Requirements).]

[(2) In the Houston/Galveston area, all rotogravure and flexographic facilities on a property which, when uncontrolled, have a maximum potential to emit a combined weight of VOC less than 25 tons in one year (based on historical ink and VOC solvent usage, and at maximum production capacity) are exempt from the requirements of §115.432(a) of this title.]

[(b) For Gregg, Nueces, and Victoria Counties, all rotogravure and flexographic facilities on a property which, when uncontrolled, emit a combined weight of VOC less than 100 tons (91 metric tons) in one year (based on historical ink and VOC solvent usage) are exempt from the requirements of §115.432(b) of this title (relating to (Control Requirements).]

SUBCHAPTER E: SOLVENT-USING PROCESSES
DIVISION 5: CONTROL REQUIREMENTS FOR SURFACE COATING PROCESSES
§§115.450, 115.451, 115.453 - 115.455, 115.458, 115.459

Statutory Authority

The new sections are adopted under Texas Water Code (TWC), §5.102, concerning General Powers, that provides the commission with the general powers to carry out its duties under the TWC; TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC; TWC, §5.105, concerning General Policy, that authorizes the commission by rule to establish and approve all general policy of the commission; and under Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The new sections are also adopted under THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; THSC, §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and THSC, §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the proper control of the state's air. The new sections are also adopted under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, that authorizes the commission to prescribe reasonable requirements for the measuring and

monitoring of air contaminant emissions; and THSC, §382.021, concerning Sampling Methods and Procedures, that authorizes the commission to prescribe the sampling methods and procedures to determine compliance with its rules. The new sections are also adopted under Federal Clean Air Act (FCAA), 42 United States Code (USC), §§7401, *et seq*., which requires states to submit state implementation plan revisions that specify the manner in which the National Ambient Air Quality will be achieved and maintained within each air quality control region of the state.

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

§115.450. Applicability and Definitions.

(a) Applicability. In the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), the requirements in this division apply to the following surface coating processes, except as specified in paragraph (6) ~~(5)~~ of this subsection:

(1) large appliance surface coating;

(2) metal furniture surface coating;

~~(3) miscellaneous metal parts and products coating at the original equipment manufacturer, off-site job shops that coat new parts and products or that recoat used parts and products, and designated on-site maintenance shops that recoat used parts and products;~~

(3) ~~(4)~~ miscellaneous metal parts and products surface coating, miscellaneous plastic parts and products coating, pleasure craft surface coating, and automotive/transportation and business machine plastic parts surface coating at the original equipment manufacturer and off-site job shops that coat new parts and products or that re-coat ~~recoat~~ used parts and products;

(4) ~~(5)~~ motor vehicle materials applied to miscellaneous metal and plastic parts specified in paragraph ~~paragraphs~~ (3) ~~and (4)~~ of this subsection, at the original equipment manufacturer and off-site job shops that coat new metal and plastic parts ~~during an operation other than automobile and light-duty truck manufacturing~~;

(5) ~~(6)~~ paper, film, and foil surface coating lines with the potential to emit from all coatings greater than or equal to 25 tons per year of volatile organic compounds (VOC) when uncontrolled; and

(6) ~~(7)~~ in the Dallas-Fort Worth area, automobile and light-duty truck assembly surface coating processes conducted by the original equipment manufacturer and operators that conduct automobile and light-duty truck surface coating processes under contract with the original equipment manufacturer.

(b) General definitions. Unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10 of this title (relating to Definitions), the terms in this division have the meanings commonly used in the field of air pollution control. In addition, the following meanings apply in this division unless the context clearly indicates otherwise.

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

(2) **Air-dried coating**--A coating that is cured at a temperature below 194 degrees Fahrenheit (90 degrees Celsius). These coatings may also be referred to as low-bake coatings.

(3) **Baked Coating**--A coating that is cured at a temperature at or above 194 degrees Fahrenheit (90 degrees Celsius). These coatings may also be referred to as high-bake coatings.

(4) **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.

(5) **Coating line**--An operation consisting of a series of one or more coating application systems and associated flash-off area(s), drying area(s), and oven(s) wherein a surface coating is applied, dried, or cured. The coating line ends at the point the coating is dried or cured, or prior to any subsequent application of a different coating.

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

(7) **Daily weighted average**--The total weight of volatile organic compounds (VOC) emissions from all coatings subject to the same VOC limit in §115.453 of this title (relating to Control Requirements), divided by the total volume or weight of

those coatings (minus water and exempt solvent), where applicable, or divided by the total volume or weight of solids, delivered to the application system on each coating line each day. Coatings subject to different VOC content limits in §115.453 of this title may not be combined for purposes of calculating the daily weighted average.

(8) **Multi-component coating**--A coating that requires the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film. These coatings may also be referred to as two-component coatings.

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

(10) **One-component coating**--A coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.

(11) **Pounds of volatile organic compounds (VOC) per gallon of coating (minus water and exempt solvent ~~solvents~~)**--The basis for content ~~emission~~ limits for surface coating processes that can be calculated by the following equation:

Figure: 30 TAC §115.450(b)(11)

~~Figure: 30 TAC §115.450(b)(11)~~

Pounds of volatile organic compounds (VOC) per gallon of coating (minus water and exempt solvent)

$$= \frac{W_V}{(V_M - V_W - V_{ES})}$$

Pounds of volatile organic compounds (VOC) per gallon of coating (minus water and exempt compounds)

$$= \frac{W_V}{(V_M - V_W - V_{ES})}$$

Where:

W_V = The weight of VOC contained in V_M gallons of coating measured in pounds.
V_M = The volume of coating, generally assumed to be one gallon.
V_W = The volume of water contained in V_M gallons of coating measured in gallons.
V_{ES} = The volume of exempt solvent ~~solvents~~ contained in V_M gallons of coating measured in gallons.

(12) **Pounds of volatile organic compounds (VOC) per gallon of solids**--The basis for emission limits for surface coating processes that can be calculated by the following equation:

Figure: 30 TAC §115.450(b)(12)

~~Figure: 30 TAC §115.450(b)(12)~~

$$\text{Pounds of volatile organic compounds (VOC) per gallon of solids} = \frac{WV}{VM - VV - VW - VES}$$

Where:

W_V = The weight of VOC contained in V_M gallons of coating measured in pounds.

V_M = The volume of coating, generally assumed to be one gallon.

V_V = The volume of VOC contained in V_M gallons of coating measured in gallons.

V_W = The volume of water contained in V_M gallons of coating measured in gallons.

V_{ES} = The volume of exempt solvent ~~solvents~~ contained in V_M gallons of coating measured in gallons.

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

(14) **Surface coating processes**--Operations that use a coating application system.

(c) Specific surface coating definitions. The following meanings apply in this division unless the context clearly indicates otherwise.

(1) **Automobile and light-duty truck manufacturing**--The following definitions apply to this surface coating category.

(A) **Adhesive**--Any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

(B) **Automobile and light-duty truck adhesive**--An adhesive, including glass-bonding adhesive, used in an automobile or light-duty truck assembly surface coating process and applied for the purpose of bonding two vehicle surfaces together without regard to the substrates involved.

(C) **Automobile and light-duty truck bedliner**--A multi-component coating used in an automobile or light-duty truck assembly surface coating process and applied to a cargo bed after the application of topcoat and outside of the topcoat operation to provide additional durability and chip resistance.

(D) **Automobile and light-duty truck cavity wax**--A coating, used in an automobile or light-duty truck assembly surface coating process, applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.

(E) **Automobile and light-duty truck deadener**--A coating used in an automobile or light-duty truck assembly surface coating process and applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

(F) **Automobile and light-duty truck gasket/gasket sealing material**--A fluid used in an automobile or light-duty truck assembly surface coating process and applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light-duty truck gasket/gasket sealing material includes room temperature vulcanization seal material.

(G) **Automobile and light-duty truck glass-bonding primer**--A primer, used in an automobile or light-duty truck assembly surface coating process, applied to windshield or other glass, or to body openings, to prepare the glass or body opening for the application of glass-bonding adhesives or the installation of adhesive-bonded glass. Automobile and light-duty truck glass-bonding primer includes glass-bonding/cleaning primers that perform both functions (cleaning and priming of the windshield or other glass, or body openings) prior to the application of an adhesive or the installation of adhesive-bonded glass.

(H) **Automobile and light-duty truck lubricating wax/compound**--A protective lubricating material used in an automobile or light-duty truck assembly surface coating process and applied to vehicle hubs and hinges.

(I) **Automobile and light-duty truck sealer**--A high viscosity material used in an automobile or light-duty truck assembly surface coating process and generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of automobile and light-duty truck sealer is to fill body joints completely so that there is no intrusion of water, gases, or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk.

(J) **Automobile and light-duty truck trunk interior coating**--A coating used in an automobile or light-duty truck assembly surface coating process outside of the primer-surfacer and topcoat operations and applied to the trunk interior to provide chip protection.

(K) **Automobile and light-duty truck underbody coating**--A coating used in an automobile or light-duty truck assembly surface coating process and applied to the undercarriage or firewall to prevent corrosion or provide chip protection.

(L) **Automobile and light-duty truck weather strip adhesive**--An adhesive used in an automobile or light-duty truck assembly surface

coating process and applied to weather-stripping materials for the purpose of bonding the weather-stripping material to the surface of the vehicle.

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

(N) **Electrodeposition primer**--A process of applying a protective, corrosion-resistant waterborne primer on exterior and interior surfaces that provides thorough coverage of recessed areas. Electrodeposition primer is a dip-coating method that uses an electrical field to apply or deposit the conductive coating onto the part; the object being painted acts as an electrode that is oppositely charged from the particles of paint in the dip tank. Electrodeposition primer is also referred to as E-Coat, Uni-Prime, and ELPO Primer.

(O) **Final repair**--The operation(s) performed and coating(s) applied to completely assembled motor vehicles or to parts that are not yet on a completely assembled vehicle to correct damage or imperfections in the coating. The curing of the coatings applied in these operations is accomplished at a lower temperature than that used for curing primer-surfacer and topcoat. This lower temperature cure avoids the need to send parts that are not yet on a completely

assembled vehicle through the same type of curing process used for primer-surfacer and topcoat and is necessary to protect heat-sensitive components on completely assembled vehicles.

(P) **In-line repair**--The operation(s) performed and coating(s) applied to correct damage or imperfections in the topcoat on parts that are not yet on a completely assembled vehicle. The curing of the coatings applied in these operations is accomplished at essentially the same temperature as that used for curing the previously applied topcoat. In-line repair is also referred to as high-bake repair or high-bake reprocess. In-line repair is considered part of the topcoat operation.

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

(R) **Primer-surfacer**--An intermediate protective coating applied over the electrodeposition primer and under the topcoat. Primer-surfacer provides adhesion, protection, and appearance properties to the total finish. Primer-surfacer is also referred to as guide coat or surfacer. Primer-surfacer operations may include other coatings (e.g., anti-chip, lower-body anti-chip, chip-resistant edge primer, spot primer,

blackout, deadener, interior color, basecoat replacement coating, etc.) that are applied in the same spray booth(s).

(S) **Topcoat**--The final coating system applied to provide the final color or a protective finish. The topcoat may be a monocoat color or basecoat/clearcoat system. In-line repair and two-tone are part of topcoat. Topcoat operations may include other coatings (e.g., blackout, interior color, etc.) that are applied in the same spray booth(s).

(T) **Solids turnover ratio (RT')**--The ratio of total volume of coating solids that is added to the electrodeposition primer system (EDP) in a calendar month divided by the total volume design capacity of the EDP system.

(2) **Automotive/transportation and business machine plastic parts**--The following definitions apply to this surface coating category.

(A) **Adhesion prime**--A coating that is applied to a polyolefin part to promote the adhesion of a subsequent coating. An adhesion prime is clearly identified as an adhesion prime or adhesion promoter on its accompanying material safety data sheet.

(B) **Black coating**--A coating that has a maximum lightness of 23 units and a saturation less than 2.8, where saturation equals the square root of $A^2 + B^2$. These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, maximum lightness is 33 units.

(C) **Business machine**--A device that uses electronic or mechanical methods to process information, perform calculations, print or copy information, or convert sound into electrical impulses for transmission. This definition includes devices listed in Standard Industrial Classification codes 3572, 3573, 3574, 3579, and 3661 and photocopy machines, a subcategory of Standard Industrial Classification code 3861.

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

(E) **Coating of plastic parts of automobiles and trucks**--The coating of any plastic part that is or will be assembled with other parts to form an automobile or truck.

(F) **Coating of ~~plastic parts of~~ business machine plastic parts ~~machines~~**--The coating of any plastic part that is or will be assembled with other parts to form a business machine.

(G) **Electrostatic prep coat**--A coating that is applied to a plastic part solely to provide conductivity for the subsequent application of a prime, a topcoat, or other coating through the use of electrostatic application methods. An electrostatic prep coat is clearly identified as an electrostatic prep coat on its accompanying material safety data sheet.

(H) **Flexible coating**--A coating that is required to comply with engineering specifications for impact resistance, mandrel bend, or elongation as defined by the original equipment manufacturer.

(I) **Fog coat**--A coating that is applied to a plastic part for the purpose of color matching without masking a molded-in texture. A fog coat may not be applied at a thickness of more than 0.5 mil of coating solids.

(J) **Gloss reducer**--A coating that is applied to a plastic part solely to reduce the shine of the part. A gloss reducer may not be applied at a thickness of more than 0.5 mil of coating solids.

(K) **Red coating**--A coating that meets all of the following criteria:

(i) yellow limit: the hue of hostaperm scarlet;

(ii) blue limit: the hue of monastral red-violet;

(iii) lightness limit for metallics: 35% aluminum flake;

(iv) lightness limit for solids: 50% titanium dioxide white;

(v) solid reds: hue angle of -11 to 38 degrees and maximum lightness of 23 to 45 units; and

(vi) metallic reds: hue angle of -16 to 35 degrees and maximum lightness of 28 to 45 units. These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, the upper limit is 49 units. The maximum lightness varies as the hue moves from violet to orange. This is a natural consequence of the strength of the colorants, and real colors show this effect.

(L) **Resist coat**--A coating that is applied to a plastic part before metallic plating to prevent deposits of metal on portions of the plastic part.

(M) **Stencil coat**--A coating that is applied over a stencil to a plastic part at a thickness of 1.0 mil or less of coating solids. Stencil coats are most frequently letters, numbers, or decorative designs.

(N) **Texture coat**--A coating that is applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating.

(O) **Vacuum-metalizing coatings**--Topcoats and basecoats that are used in the vacuum-metalizing process.

(3) **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.

(A) **Extreme high-gloss coating**--A coating which, when tested by the American Society for Testing Material Test Method D523 ~~D-523~~ adopted in 1980, shows a reflectance of 75% or more on a 60 degree meter.

(B) **Extreme performance coating**--A coating used on a metal surface where the coated surface is, in its intended use, subject to:

(i) chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;

(ii) repeated exposure to temperatures in excess of 250 degrees Fahrenheit (121 degrees Celsius); ~~or~~

(iii) repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents; or ~~.~~

(iv) exposure to extreme environmental conditions, such as continuous outdoor exposure.

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

(D) **Metallic coating**--A coating that contains more than 0.042 pounds of metal particles per gallon of ~~5.0 grams of metal particles per liter of~~ coating as applied. Metal particles are pieces of a pure elemental metal or a combination of elemental metals.

(E) **Pretreatment coating**--A coating that contains no more than 12% solids by weight~~,~~ and at least 0.50% acid~~,~~ by weight; is used to provide surface etching; and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

(F) **Solar-absorbent coating**--A coating that has as its prime purpose the absorption of solar radiation.

(4) **Metal furniture coating**--The coating of metal furniture including, but not limited to, ~~to~~ tables, chairs, wastebaskets, beds, desks, lockers, benches, shelves, file cabinets, lamps, and other metal furniture products or the coating of any metal part that will be a part of a nonmetal furniture product.

(A) **Extreme high-gloss coating**--A coating which, when tested by the American Society for Testing Material Test Method D523 ~~D-523~~ adopted in 1980, shows a reflectance of 75% or more on a 60 degree meter.

(B) **Extreme performance coating**--A coating used on a metal surface where the coated surface is, in its intended use, subject to:

(i) chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;

(ii) repeated exposure to temperatures in excess of 250 degrees Fahrenheit (121 degrees Celsius); ~~or~~

(iii) repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents; or ~~.~~

(iv) exposure to extreme environmental conditions, such as continuous outdoor exposure.

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

(D) **Metallic coating**--A coating containing more than 5.0 grams of metal particles per liter of coating as applied. Metal particles are pieces of a pure elemental metal or a combination of elemental metals.

(E) **Pretreatment coating**--A coating that contains no more than 12% solids by weight~~,~~ and at least 0.50% acid~~,~~ by weight; is used to provide surface etching; and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

(F) **Solar-absorbent coating**--A coating that has as its primary ~~prime~~ purpose the absorption of solar radiation.

(5) **Miscellaneous metal and plastic parts**--The following definitions apply to this surface coating category.

(A) **Camouflage coating**--A coating used, principally by the military, to conceal equipment from detection.

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

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

(D) **Electric-dissipating coating**--A coating that rapidly dissipates a high-voltage electric charge.

(E) **Electric-insulting varnish**--A non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

(F) **EMI/RFI shielding**--A coating used on electrical or electronic equipment to provide shielding against electromagnetic interference (EMI), radio frequency interference (RFI), or static discharge.

(G) **Etching filler**--A coating that contains less than 23% solids by weight and at least 0.50% acid by weight and is used instead of applying a pretreatment coating followed by a primer.

(H) **Extreme high-gloss coating**--A coating which, when tested by the American Society for Testing and Materials Test Method D523 ~~D-523~~ adopted in 1980, shows a reflectance of 75% or more on a 60 degree meter.

(I) **Extreme performance coating**--A coating used on a metal or plastic surface where the coated surface is, in its intended use, subject to one of the following conditions. Extreme performance coatings include, but are not limited to, coatings applied to locomotives, railroad cars, farm machinery, marine shipping containers, downhole drilling equipment, and heavy-duty trucks:

(i) chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;

(ii) repeated exposure to temperatures in excess of 250 degrees Fahrenheit (121 degrees Celsius); ~~or~~

(iii) repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents; or ~~.~~

(iv) exposure to extreme environmental conditions, such as continuous outdoor exposure.

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

(K) **High performance architectural coating**--A coating used to protect architectural subsections and meets the requirements of the American Architectural Manufacturers Association's publication number AAMA 2604-05 (Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels) or 2605-05 (Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels).

(L) **High temperature coating**--A coating that is certified to withstand a temperature of 1000 degrees Fahrenheit (538 degrees Celsius) for 24 hours.

(M) **Mask coating**--A thin film coating applied through a template to coat a small portion of a substrate.

(N) **Metallic coating**--A coating containing more than 5.0 grams of metal particles per liter of coating as applied. Metal particles are pieces of a pure elemental metal or a combination of elemental metals.

(O) **Military specification coating**--A coating that has a formulation approved by a United States Military Agency for use on military equipment.

(P) **Mold-seal coating**--The initial coating applied to a new mold or a repaired mold to provide a smooth surface that ~~which,~~ when coated with a mold release coating, prevents products from sticking to the mold.

(Q) **Miscellaneous metal parts and products**--Parts and products considered miscellaneous metal parts and products include:

(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 that 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 §115.420(b)(1) - (8) and (10) - (14) of this title (relating to Surface Coating Definitions) and paragraphs (1) - (4) and (6) - (8) of this subsection.

(R) **Miscellaneous plastic parts and products**--Parts and products considered miscellaneous plastic parts and products include, but are not limited to:

(i) molded plastic parts;

(ii) small and large farm machinery;

(iii) commercial and industrial machinery and equipment;

(iv) interior or exterior automotive parts;

(v) construction equipment;

(vi) motor vehicle accessories;

(vii) bicycles and sporting goods;

(viii) toys;

(ix) recreational vehicles;

(x) lawn and garden equipment;

(xi) laboratory and medical equipment;

(xii) electronic equipment; and

(xiii) other industrial and household products. Excluded are those surface coating processes specified in §115.420(b)(1) - (14) of this title and paragraphs (1) - (4) and (6) - (8) of this subsection.

(S) ~~(R)~~ **Multi-colored coating**--A coating that exhibits more than one color when applied, is packaged in a single container, and applied in a single coat.

(T) ~~(S)~~ **Off-site job shop**--A non-manufacturer of metal or plastic parts and products that applies coatings to such products at a site ~~exclusively~~ under contract with one or more parties that operate under separate ownership and control.

(U) ~~(T)~~ **Optical coating**--A coating applied to an optical lens.

(V) ~~(U)~~ **Pail (metal)**--Any cylindrical metal shipping container with a 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.

(W) ~~(V)~~ **Pan-backing coating**--A coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

(X) ~~(W)~~ **Prefabricated architectural component coating**--A coating applied to metal parts and products that are to be used as an architectural structure.

(Y) ~~(X)~~ **Pretreatment coating**--A coating that contains no more than 12% solids by weight~~,~~ and at least 0.50% acid~~,~~ by weight; is used to provide surface etching; and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

(Z) ~~(Y)~~ **Repair coating**--A coating used to re-coat ~~recoat~~ portions of a previously coated product that has sustained mechanical damage to the coating following normal surface coating processes ~~operations~~.

(AA) **Safety-indicating coating**--A coating that changes physical characteristics, such as color, to indicate unsafe conditions.

(BB) ~~(Z)~~ **Shock-free coating**--A coating applied to electrical components to protect the user from electric shock. The coating has characteristics of being low-capacitance and high-resistance and having resistance to breaking down under high voltage.

(CC) ~~(AA)~~ **Silicone-release coating**--A coating that contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.

(DD) ~~(BB)~~ **Solar-absorbent coating**--A coating that has as its primary ~~prime~~ purpose the absorption of solar radiation.

(EE) ~~(CC)~~ **Stencil coating**--A pigmented coating or ink that is rolled or brushed onto a template or stamp in order to add identifying letters, symbols, or numbers.

(FF) ~~(DD)~~ **Touch-up coating**--A coating used to cover minor coating imperfections appearing after the main surface coating process ~~operation~~.

(GG) ~~(EE)~~ **Translucent coating**--A coating that contains binders and pigment and formulated to form a colored, but not opaque, film.

(HH) ~~(FF)~~ **Vacuum-metalizing coating**--The undercoat applied to the substrate on which the metal is deposited or the overcoat applied directly to the metal film. Vacuum metalizing or physical vapor deposition is the process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

(6) **Motor vehicle materials**--The following definitions apply to this surface coating category.

(A) **Motor vehicle bedliner**--A multi-component coating, used in a process that is not an automobile or light-duty truck manufacturing assembly coating process, applied to a cargo bed after the application of topcoat to provide additional durability and chip resistance.

(B) **Motor vehicle cavity wax**--A coating used in a process that is not an automobile or light-duty truck assembly coating process and applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.

(C) **Motor vehicle deadener**--A coating used in a process that is not an automobile or light-duty truck assembly coating process and applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

(D) **Motor vehicle gasket/sealing material**--A fluid used in a process that is not an automobile or light-duty truck assembly coating process and applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light-duty truck gasket/gasket sealing material includes room temperature vulcanization seal material.

(E) **Motor vehicle lubricating wax/compound**--A protective lubricating material used in a process that is not an automobile or light-duty truck assembly coating process and applied to vehicle hubs and hinges.

(F) **Motor vehicle sealer**--A high viscosity material used in a process that is not an automobile or light-duty truck assembly coating process and is generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of motor vehicle sealer ~~automobile and light-duty truck sealer~~ is to fill body joints completely so that there is no intrusion of water,

gases, or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk.

(G) **Motor vehicle trunk interior coating**--A coating used in a process that is not an automobile or light-duty truck assembly coating process and applied to the trunk interior to provide chip protection.

(H) **Motor vehicle underbody coating**--A coating used in a process that is not an automobile or light-duty truck assembly coating process and applied to the undercarriage or firewall to prevent corrosion or provide chip protection.

(7) **Paper, film, and foil coating**--The coating of paper and pressure-sensitive tapes (regardless of substrate and including paper, fabric, and plastic film), related web coating processes on plastic film (including typewriter ribbons, photographic film, and magnetic tape), metal foil (including decorative, gift wrap, and packaging), industrial and decorative laminates, abrasive products (including fabric coated for use in abrasive products), and flexible packaging. ~~Paper, film, and foil coating includes the application of a continuous layer of a coating material across the entire width or any portion of the width of a paper, film, or foil web substrate to: provide a covering, finish, or functional or protective layer to the substrate; saturate the substrate for lamination; or provide adhesion between two substrates for lamination. Paper, film,~~

~~and foil coating does not include coating performed on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press. In addition, size presses and on-machine coaters that function as part of an in-line papermaking system are not included.~~

(A) Paper, film, and foil coating includes the application of a continuous layer of a coating material across the entire width or any portion of the width of a paper, film, or foil web substrate to:

(i) provide a covering, finish, or functional or protective layer to the substrate;

(ii) saturate the substrate for lamination; or

(iii) provide adhesion between two substrates for lamination.

(B) Paper, film, and foil coating excludes coating performed on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press; or size presses and on-machine coaters that function as part of an in-line papermaking system.

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

(A) **Antifoulant coating**-- A ~~Any~~ coating applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms, and registered with the United States Environmental Protection Agency as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code, §136).

(B) **Antifoulant sealer/tie coating**--A coating applied over an antifoulant coating to prevent the release of biocides into the environment or to promote adhesion between an antifoulant coating and a primer or other antifoulants.

(C) ~~(B)~~ **Extreme high-gloss coating**-- A ~~Any~~ coating that achieves at least 90% ~~95%~~ reflectance on a 60 degree meter when tested by American Society for Testing and Materials Method D523-89 ~~D 523-89~~.

(D) ~~(C)~~ **Finish primer-surfacer**--A coating applied with a wet film thickness less than 10 mils prior to the application of a topcoat for purposes of

providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier, or promotion of a uniform surface necessary for filling in surface imperfections.

(E) ~~(D)~~ **High-build primer-surfacer**--A coating applied with a wet film thickness of 10 mils or more prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, or a moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections.

(F) ~~(E)~~ **High-gloss coating**-- A ~~Any~~ coating that achieves at least 85% reflectance on a 60 degree meter when tested by American Society for Testing and Materials Test Method D523-89 ~~D 523-89~~.

(G) ~~(F)~~ **Pleasure craft coating**-- A ~~Any~~ marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.

(H) ~~(G)~~ **Pretreatment wash primer**--A coating that contains no more than 25% ~~12%~~ solids by weight and at least 0.10% ~~0.50%~~ acids by weight; used to provide surface etching; and applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings.

(I) **Repair coating**--A coating used to re-coat portions of a previously coated product that has sustained mechanical damage to the coating following normal surface coating processes.

(J) ~~(H)~~ **Topcoat**-- A ~~Any~~ final coating applied to the interior or exterior of a pleasure craft.

(K) **Touch-up coating**--A coating used to cover minor coating imperfections appearing after the main surface coating process.

§115.451. Exemptions.

~~The following exemptions apply to the owner or operator of a surface coating process subject to this division.~~

(a) ~~(1)~~ The ~~Excluded from the~~ volatile organic compounds (VOC) from ~~emission calculations are~~ coatings and solvents used in surface coating processes ~~activities~~ and associated cleaning operations not addressed by the surface coating categories in §115.421(a)(3), (5) - (7), ~~(8)(A),~~ and (10) - (15) of this title (relating to Emission Specifications) or §115.453 of this title (relating to ~~Emission Specifications and~~ Control Requirements~~, respectively~~) are excluded from the VOC emission calculations for the

purposes of paragraphs (1) - (3) of this subsection. For example, architectural coatings applied in the field to stationary structures and their appurtenances, portable buildings, pavements, or curbs at a property would not be included in the calculations.

(1) ~~(A)~~ All surface coating processes on a property that, when uncontrolled, will emit a combined weight of VOC of less than 3.0 pounds per hour and 15 pounds in any consecutive 24-hour period are exempt from §115.453 of this title.

(2) ~~(B)~~ Surface coating processes on a property that, when uncontrolled, will emit a combined weight of VOC of less than 100 pounds in any consecutive 24-hour period are exempt from §115.453(a) of this title if documentation is provided to and approved by both the executive director and the United States Environmental Protection Agency to demonstrate that necessary coating performance criteria cannot be achieved with coatings that satisfy applicable VOC limits and that control equipment is not technologically or economically feasible.

(3) ~~(C)~~ Surface coating processes on a property where total coating and solvent usage does not exceed 150 gallons in any consecutive 12-month period are exempt from the VOC limits in §115.453(a) of this title.

(b) ~~(2)~~ The following surface coating processes are exempt from the VOC limits for miscellaneous metal and plastic parts coatings in §115.453(a)(1)(C) and (D) of this title ~~(F)~~ and motor vehicle materials in §115.453(a)(2) of this title:

(1) ~~(A)~~ large appliance surface coating;

(2) ~~(B)~~ metal furniture surface coating; ~~and~~

(3) ~~(C)~~ automobile and light-duty truck assembly surface coating; and~~.~~

(4) surface coating processes specified in §115.420(b)(1) - (8) and (10) - (14) of this title (relating to Surface Coating Definitions).

(c) ~~(3)~~ Paper, film, and foil surface coating processes are exempt from the coating application system requirements in §115.453(c) of this title and the coating use work practice requirements in §115.453(d)(1) of this title.

(d) ~~(4)~~ Automobile and light-duty truck assembly surface coating processes are exempt from the coating application system requirements in §115.453(c) of this title and the cleaning-related work practice requirements in §115.453(d)(2) of this title.

(e) ~~(5)~~ Automobile and light-duty truck assembly surface coating materials supplied in containers with a net volume of 16 ounces or less, or a net weight of 1.0 pound or less, are exempt from the VOC limits in Table 2 in §115.453(a)(3) of this title.

(f) ~~(6)~~ The following miscellaneous metal part and product surface coatings and surface coating processes ~~operations~~ are exempt from the coating application system requirements in §115.453(c) of this title:

(1) ~~(A)~~ touch-up coatings, repair coatings, and textured finishes;

(2) ~~(B)~~ stencil coatings;

(3) ~~(C)~~ safety-indicating coatings;

(4) ~~(D)~~ solid-film lubricants;

(5) ~~(E)~~ electric-insulating and thermal-conducting coatings;

(6) ~~(F)~~ magnetic data storage disk coatings; and

(7) ~~(G)~~ plastic extruded onto metal parts to form a coating.

(g) ~~(7)~~ All miscellaneous plastic part airbrush surface coatings and surface coating processes ~~operations~~ where total coating usage is less than 5.0 gallons per year are exempt from the coating application system requirements in §115.453(c) of this title.

(h) ~~(8)~~ The application of extreme high-gloss coatings to pleasure craft is exempt from the coating application system requirements in §115.453(c) of this title.

(i) ~~(9)~~ The following miscellaneous plastic parts surface coatings and surface coating processes ~~operations~~ are exempt from the coating VOC limits in §115.453(a)(1)(D) of this title:

(1) ~~(A)~~ touch-up and repair coatings;

(2) ~~(B)~~ stencil coatings applied on clear or transparent substrates;

(3) ~~(C)~~ clear or translucent coatings;

(4) ~~(D)~~ any individual coating type used in volumes less than 50 gallons in any one year, if substitute compliant coatings are not available, provided that the total usage of all such coatings does not exceed 200 gallons per year, per property ~~facility~~;

(5) ~~(E)~~ reflective coating applied to highway cones;

(6) ~~(F)~~ mask coatings that are less than 0.5 mil thick dried and the area coated is less than 25 square inches;

(7) ~~(G)~~ electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings; and

(8) ~~(H)~~ heparin-benzalkonium chloride-containing coatings applied to medical devices, if the total usage of all such coatings does not exceed 100 gallons per year, per property ~~facility~~.

(j) ~~(10)~~ The following automotive/transportation and business machine plastic part surface coatings and surface coating processes are exempt from the VOC limits in §115.453(a)(1)(E) ~~(F)~~ of this title:

(1) ~~(A)~~ texture coatings;

(2) ~~(B)~~ vacuum-metalizing coatings;

(3) ~~(C)~~ gloss reducers;

(4) ~~(D)~~ texture topcoats;

(5) ~~(E)~~ adhesion prime;

(6) ~~(F)~~ electrostatic preparation coatings;

(7) ~~(G)~~ resist coatings; and

(8) ~~(H)~~ stencil coatings.

(k) ~~(11)~~ Powder coatings applied during metal and plastic parts surface coating processes are exempt from the requirements in this division, except as specified in §115.458(b)(5) of this title (relating to Monitoring and Recordkeeping Requirements).

(l) ~~(12)~~ Aerosol coatings (spray paint) are exempt from this division.

(m) ~~(13)~~ Coatings applied to test panels and coupons as part of research and development, quality control, or performance testing activities at paint research or manufacturing facilities are exempt from the requirements in this division.

(n) Pleasure craft touch-up and repair coatings supplied in containers less than or equal to 1.0 quart, are exempt from the VOC limits in §115.453(a)(1)(F) of this title provided that the total usage of all such coatings does not exceed 50 gallons per calendar year per property.

(o) Pleasure craft surface coating processes are exempt from the VOC limits in §115.453(a)(1)(C) and (D) of this title.

§115.453. Control Requirements.

(a) The following control requirements apply to surface coating processes subject to this division. Except as specified in paragraph (3) of this subsection, these limitations are based on the daily weighted average of all coatings, as defined in §101.1 of this title (relating to Definitions), as delivered to the application system.

(1) ~~The owner or operator shall not apply coatings that exceed the volatile organic compounds (VOC) limits for each of the coating categories in this paragraph.~~ The following limits must be met by applying low-volatile organic compound (VOC) coatings to meet the specified VOC content limits on a pound of VOC per gallon of coating basis (lb VOC/gal coating)~~, as delivered to the application system~~ (minus water

and exempt solvent), or by applying ~~low-VOC~~ coatings in combination with the operation of a vapor control system, as defined in §115.10 (relating to Definitions), to meet the specified VOC emission limits on a pound of VOC per gallon of solids basis (lb VOC/gal solids). If a coating meets more than one coating type definition, then the coating with the least stringent VOC limit applies.

(A) Large appliances. If a coating does not meet a specific coating type definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.

Figure: 30 TAC §115.453(a)(1)(A)

~~Figure: 30 TAC §115.453(a)(1)(A)~~

Table 1.

Coating Type	**Baked pounds of volatile organic compounds per gallon coating**	**Air-Dried pounds of volatile organic compounds per gallon coating**
General Coating, One-Component	2.3	2.3
General Coating, Multi-Component	2.3	2.8
Extreme High-Gloss Coating	2.8 ~~3.0~~	2.8
Extreme Performance Coating	2.8 ~~3.0~~	2.8 ~~3.5~~
Heat-Resistant Coating	2.8 ~~3.0~~	2.8 ~~3.5~~
Metallic Coating	2.8 ~~3.5~~	2.8 ~~3.5~~
Pretreatment Coating	2.8 ~~3.5~~	2.8 ~~3.5~~
Solar-Absorbent Coating	2.8 ~~3.0~~	2.8 ~~3.5~~

Table 2.

Coating Type	**Baked pounds of volatile organic compounds per gallon solids**	**Air-Dried pounds of volatile organic compounds per gallon solids**
General Coating, One-Component	3.3	3.3
General Coating, Multi-Component	3.3	4.5
Extreme High-Gloss Coating	4.5 ~~5.1~~	4.5
Extreme Performance Coating	4.5 ~~5.1~~	4.5 ~~6.7~~
Heat-Resistant Coating	4.5 ~~5.1~~	4.5 ~~6.7~~
Metallic Coating	4.5 ~~6.7~~	4.5 ~~6.7~~
Pretreatment Coating	4.5 ~~6.7~~	4.5 ~~6.7~~
Solar-Absorbent Coating	4.5 ~~5.1~~	4.5 ~~6.7~~

(B) Metal furniture. If a coating does not meet a specific coating type definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.

Figure: 30 TAC §115.453(a)(1)(B)

~~Figure: 30 TAC §115.453(a)(1)(B)~~

Table 1.

Coating Type	**Baked pounds of volatile organic compounds per gallon coating**	**Air-Dried pounds of volatile organic compounds per gallon coating**
General Coating, One-Component	2.3	2.3
General Coating, Multi-Component	2.3	2.8
Extreme High-Gloss Coating	3.0	2.8
Extreme Performance Coating	3.0	3.0 ~~3.5~~
Heat-Resistant Coating	3.0	3.0 ~~3.5~~
Metallic Coating	3.0 ~~3.5~~	3.0 ~~3.5~~
Pretreatment Coating	3.0 ~~3.5~~	3.0 ~~3.5~~
Solar-Absorbent Coating	3.0	3.0 ~~3.5~~

Table 2.

Coating Type	**Baked pounds of volatile organic compounds per gallon solids**	**Air-Dried pounds of volatile organic compounds per gallon solids**
General Coating, One-Component	3.3	3.3
General Coating, Multi-Component	3.3	4.5
Extreme High-Gloss Coating	5.1	4.5
Extreme Performance Coating	5.1	5.1 ~~6.7~~
Heat-Resistant Coating	5.1	5.1 ~~6.7~~
Metallic Coating	5.1 ~~6.7~~	5.1 ~~6.7~~
Pretreatment Coating	5.1 ~~6.7~~	5.1 ~~6.7~~
Solar-Absorbent Coating	5.1	5.1 ~~6.7~~

(C) Miscellaneous metal parts and products. If a coating does not meet a specific coating type definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.

Figure: 30 TAC §115.453(a)(1)(C)

~~Figure: 30 TAC §115.453(a)(1)(C)~~

Table 1.

Coating Category	Air-Dried pounds of volatile organic compounds per gallon coating	Baked pounds of volatile organic compounds per gallon coating
General Coating, One-Component	2.8	2.3
General Coating, Multi-Component	2.8	2.3
Camouflage Coating	3.5	3.0 ~~3.5~~
Electric-Insulating Varnish Coating	3.5	3.0 ~~3.5~~
Etching Filler Coating	3.5	3.0 ~~3.5~~
Extreme High-Gloss Coating	3.5	3.0
Extreme Performance Coating	3.5	3.0
Heat-Resistant Coating	3.5	3.0
High Performance Architectural Coating	6.2	6.2
High Temperature Coating	3.5	3.5
Metallic Coating	3.5	3.0 ~~3.5~~
Military Specification Coating	2.8	2.3
Mold-Seal Coating	3.5	3.0 ~~3.5~~
Pan-Backing Coating	3.5	3.5
Prefabricated Architectural Coating, Multi-Component	3.5	2.3
Prefabricated Architectural Coating, One-Component	3.5	2.3
Pretreatment Coating	3.5	3.0 ~~3.5~~
Repair and Touch-Up Coating	3.5	3.0
Silicone Release Coating	3.5	3.0 ~~3.5~~
Solar-Absorbent Coating	3.5	3.0
Vacuum-Metalizing Coating	3.5	3.0 ~~3.5~~
Drum Coating, New, Exterior	2.8	2.8
Drum Coating, New, Interior	3.5	3.5

Coating Category	Air-Dried pounds of volatile organic compounds per gallon coating	Baked pounds of volatile organic compounds per gallon coating
Drum Coating, Reconditioned, Exterior	3.5	3.0 ~~3.5~~
Drum Coating, Reconditioned, Interior	4.2	4.2

Table 2.

Coating Category	Air-Dried pounds of volatile organic compounds per gallon solids	Baked pounds of volatile organic compounds per gallon solids
General Coating, One-Component	4.52	3.35
General Coating, Multi-Component	4.52	3.35
Camouflage Coating	6.67	5.06 ~~6.67~~
Electric-Insulating Varnish Coating	6.67	5.06 ~~6.67~~
Etching Filler Coating	6.67	5.06 ~~6.67~~
Extreme High-Gloss Coating	6.67	5.06
Extreme Performance Coating	6.67	5.06
Heat-Resistant Coating	6.67	5.06
High Performance Architectural Coating	38.0	38.0
High Temperature Coating	6.67	6.67
Metallic Coating	6.67	5.06 ~~6.67~~
Military Specification Coating	4.52	3.35
Mold-Seal Coating	6.67	5.06 ~~6.67~~
Pan-Backing Coating	6.67	6.67
Prefabricated Architectural Coating, Multi-Component	6.67	3.35
Prefabricated Architectural Coating, One-Component	6.67	3.35
Pretreatment Coating	6.67	5.06 ~~6.67~~
Repair and Touch-up Coating	6.67	5.06
Silicone Release Coating	6.67	5.06 ~~6.67~~
Solar-Absorbent Coating	6.67	5.06

Coating Category	Air-Dried pounds of volatile organic compounds per gallon solids	Baked pounds of volatile organic compounds per gallon solids
Vacuum-Metalizing Coating	6.67	5.06 ~~6.67~~
Drum Coating, New, Exterior	4.52	4.52
Drum Coating, New, Interior	6.67	6.67
Drum Coating, Reconditioned, Exterior	6.67	5.06 ~~6.67~~
Drum Coating, Reconditioned, Interior	9.78	9.78

(D) Miscellaneous plastic parts and products. If a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.

Figure: 30 TAC §115.453(a)(1)(D)

~~Figure: 30 TAC §115.453(a)(1)(D)~~

Table 1.

Coating Category	Pounds ~~pounds~~ of volatile organic compounds per gallon coating
General Coating, One-Component	2.3
General Coating, Multi-Component	3.5
Electric-Dissipating and Shock-Free Coating	6.7
Extreme Performance Coating, Multi-Component	3.5
Metallic Coating	3.5
Military Specification Coating, One-Component	2.8
Military Specification Coating, Multi-Component	3.5
Mold-Seal Coating	6.3

Coating Category	**Pounds ~~pounds~~ of volatile organic compounds per gallon coating**
Multi-Colored Coating	5.7
Optical Coating	6.7
Vacuum-Metalizing Coating	6.7

Table 2.

Coating Category	**Pounds ~~pounds~~ of volatile organic compounds per gallon solids**
General Coating, One-Component	3.35
General Coating, Multi-Component	6.67
Electric-Dissipating and Shock-Free Coating	74.7
Extreme Performance Coating, Multi-Component	6.67
Metallic Coating	6.67
Military Specification Coating, One-Component	4.52
Military Specification Coating, Multi-Component	6.67
Mold-Seal Coating	43.7
Multi-Colored Coating	25.3
Optical Coating	74.7
Vacuum-Metalizing Coating	74.7

(E) Automotive/transportation and business machine plastic parts. For red, yellow, and black automotive/transportation coatings, except touch-up and repair coatings, the VOC limit is determined by multiplying the appropriate limit in Table 1 of this subparagraph by 1.15.

Figure: 30 TAC §115.453(a)(1)(E)

~~Figure: 30 TAC §115.453(a)(1)(E)~~

Table 1.

Automotive/Transportation Coating Category	**Pounds ~~pounds~~ of volatile organic compounds per gallon coating**	**Pounds ~~pounds~~ of volatile organic compounds per gallon solids**
Flexible Primer, Baked, Interior and Exterior Parts	4.5	11.58
Non-flexible Primer, Baked, Interior and Exterior Parts	3.5	6.67
Base Coats, Baked, Interior and Exterior Parts	4.3	10.34
Clear Coat, Baked, Interior and Exterior Parts	4.0	8.76
Non-basecoat/clear coat, Baked, Interior and Exterior Parts	4.3	10.34
Primers, Air-Dried, Exterior Parts	4.8	13.80
Basecoat, Air-Dried, Exterior Parts	5.0	15.59
Clear coats, Air-Dried, Exterior Parts	4.5	11.58
Non-basecoat/clear coat, Air-Dried, Exterior Parts	5.0	15.59
Air-Dried Coatings, Interior Parts	5.0	15.59
Touch-up and Repair Coatings	5.2	17.72

Table 2.

Business Machine Coating Category	**Pounds ~~pounds~~ of volatile organic compounds per gallon coating**	**Pounds ~~pounds~~ of volatile organic compounds per gallon solids**
Primers	2.9	4.80
Topcoat	2.9	4.80
Texture Coat	2.9	4.80
Fog Coat	2.2	3.14

Business Machine Coating Category	**Pounds ~~pounds~~ of volatile organic compounds per gallon coating**	**Pounds ~~pounds~~ of volatile organic compounds per gallon solids**
Touch-up and repair	2.9	4.80

(F) Pleasure craft. If a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating and the VOC limits for other coatings applies.

Figure: 30 TAC §115.453(a)(1)(F)

~~Figure: 30 TAC §115.453(a)(1)(F)~~

Table 1.

Coating Category	**Pounds ~~pounds~~ of volatile organic compounds per gallon coating**
Extreme High-Gloss Topcoat	5.0 ~~4.1~~
High-Gloss Topcoat	3.5
Pretreatment Wash Primers	6.5
Finish Primer-Surfacer	5.0 ~~3.5~~
High Build Primer-Surfacer	2.8
Aluminum Substrate Antifoulant	4.7
Other Substrate Antifoulant	3.3 ~~2.8~~
Antifoulant Sealer/Tie Coating	3.5
All other pleasure craft surface coatings for metal or plastic	3.5

Table 2.

Coating Category	**Pounds ~~pounds~~ of volatile organic compounds per gallon solids**
Extreme High-Gloss Topcoat	15.6 ~~9.2~~
High-Gloss Topcoat	6.7
Pretreatment Wash Primers	55.6
Finish Primer-Surfacer	15.6 ~~6.7~~
High Build Primer-Surfacer	4.6
Aluminum Substrate Antifoulant	12.8
Other Substrate Antifoulant	6.0 ~~4.4~~
Antifoulant Sealer/Tie Coating	6.7
All other pleasure craft surface coatings for metal or plastic	6.7

(2) The coating VOC limits for motor vehicle materials applied ~~The owner or operator shall not apply motor vehicle materials~~ to the metal and plastic parts in paragraph (1)(C) - (F) of this subsection, ~~that exceed the following limits,~~ as delivered to the application system, must be met using low-VOC coatings (minus water and exempt solvent).

Figure: 30 TAC §115.453(a)(2)

~~Figure: 30 TAC §115.453(a)(2)~~

Coating Category	**Pounds ~~pounds~~ of volatile organic compounds per gallon coating**
Motor vehicle cavity wax	5.4
Motor vehicle sealer	5.4
Motor vehicle deadener	5.4
Motor vehicle gasket/gasket sealing material	1.7
Motor vehicle underbody	5.4
Motor vehicle trunk interior	5.4
Motor vehicle bedliner	1.7
Motor vehicle lubricating wax/compound	5.8

(3) The coating VOC limits for ~~owner or operator shall not apply coatings that exceed the following VOC limits during~~ automobile and light-duty truck assembly surface coating processes must be met by applying low-VOC coatings.

Figure: 30 TAC §115.453(a)(3)

~~Figure: 30 TAC §115.453(a)(3)~~

Table 1.

Assembly Coating Process	**Volatile ~~volatile~~ organic compounds (VOC) limit ~~Limit~~**
Electrodeposition primer (EDP) operations (including application area, spray/rinse stations, and curing oven) When solids turnover ratio (R_T) $\geq$ 0.16	0.7 pound per gallon (lb/gal) of coating solids applied

Assembly Coating Process	**Volatile ~~volatile~~ organic compounds (VOC) limit ~~Limit~~**
EDP operations (including application area, spray/rinse stations, and curing oven) When $0.040 \leq R_T < 0.16$	$0.7 \times 350^{0.160-R_T}$ lb/gal of coating solids applied
EDP operations (including application area, spray/rinse stations, and curing oven) When $R_T < 0.0400$	No VOC ~~emission~~ limit
Primer-surfacer operations (including application area, flash-off area, and oven)	12.0 lb ~~lbs~~ VOC/gal of solids deposited
Topcoat operations (including application area, flash-off area, and oven)	12.0 lb ~~lbs~~ VOC/gal of solids deposited
Combined primer-surfacer and topcoat operations	12.0 lb ~~lbs~~ VOC/gal of solids deposited
Final repair operations	4.8 lb VOC/gal of coating (minus water and exempt solvent ~~solvents~~)

Table 2.

Material	**Volatile ~~volatile~~ organic compounds (VOC) limit ~~Limit~~ (excluding water and exempt solvent ~~compounds~~, as applied)**
Automobile and light-duty truck glass-bonding primer	7.51 pounds volatile organic compounds per gallon of coating (lb VOC/gal)
Automobile and light-duty truck adhesive	2.09 lb VOC/gal of coating
Automobile and light-duty truck cavity wax	5.42 lb VOC/gal of coating
Automobile and light-duty truck sealer	5.42 lb VOC/gal of coating
Automobile and light-duty truck deadener	5.42 lb VOC/gal of coating

Material	**Volatile ~~volatile~~ organic compounds (VOC) limit ~~Limit~~ (excluding water and exempt solvent ~~compounds~~, as applied)**
Automobile and light-duty truck gasket/gasket sealing material	1.67 lb VOC/gal of coating
Automobile and light-duty truck underbody coating	5.42 lb VOC/gal of coating
Automobile and light-duty truck trunk interior coating	5.42 lb VOC/gal of coating
Automobile and light-duty truck bedliner	1.67 lb VOC/gal of coating
Automobile and light-duty truck weatherstrip adhesive	6.26 lb VOC/gal of coating
Automobile and light-duty truck lubricating wax/compound	5.84 lb VOC/gal of coating

(A) The owner or operator shall determine compliance with the VOC limits for electrodeposition primer operations on a monthly weighted average in accordance with §115.455(a)(2)(D) of this title (relating to Approved Test Methods and Testing Requirements).

(B) As an alternative to the VOC limit in Table 1 of this paragraph for final repair coatings, if an owner or operator does not compile records sufficient to enable determination of the ~~a~~ daily weighted average ~~VOC content~~, compliance may be demonstrated each day by meeting a standard of 4.8 lb VOC/gal coating (minus water and exempt solvent ~~solvents~~) on an occurrence weighted average basis. Compliance with

the VOC limits on an occurrence weighted average basis must be determined in accordance with the procedure specified in §115.455(a)(2) of this title.

(C) The owner or operator shall determine compliance with the VOC ~~content~~ limits in Table 2 of this paragraph in accordance with §115.455(a)(1) or (2)(C) of this title, as appropriate.

(4) The coating VOC limits for ~~owner or operator of~~ paper, film, and foil surface coating processes ~~lines shall not apply coatings that exceed the following limits. The limits may~~ must be met by applying low-VOC coatings to meet the specified VOC content limits on a pound of VOC per pound of coating basis, as delivered to the application system, or by applying ~~low-VOC~~ coatings in combination with the operation of a vapor control system to meet the specified VOC emission limits on a pound of VOC per pound of solids basis, as delivered to the application system.

Figure: 30 TAC §115.453(a)(4)

~~Figure: 30 TAC §115.453(a)(4)~~

Coating Type	**Pounds of volatile organic compounds per pound coating ~~solids~~**	**Pounds of volatile organic compounds per pound solids ~~coating~~**
Pressure Sensitive Tape and Label Surface Coating	0.067 ~~0.2~~	0.2 ~~0.067~~
Paper, Film, and Foil Surface Coating (Not including Pressure Sensitive Tape and Label)	0.08 ~~0.4~~	0.4 ~~0.08~~

(5) An owner or operator applying ~~low-VOC~~ coatings in combination with the operation of a vapor control system to meet the VOC emission limits in paragraph (1) or (4) of this subsection shall use the following equation to determine the minimum overall control efficiency necessary to demonstrate equivalency. Control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.455 (a)(3) and (4) of this title.

Figure: 30 TAC §115.453(a)(5)

~~Figure: 30 TAC §115.453(a)(5)~~

$$E = \frac{(VOC - S)}{VOC}$$

Where:
E = The required overall control efficiency, decimal fraction.
VOC = The volatile organic compounds (VOC) content of the coatings used on the coating line expressed on a solids basis in units consistent with the VOC emission limits provided in paragraphs (1) or (4) of this subsection. The owner or operator may choose to use either a daily weighted average or the maximum VOC content.
S = The applicable VOC emission limit in paragraphs (1) or (4) of this subsection expressed on a solids basis in units consistent with the units expressed in the VOC variable above.

(b) Except for the surface coating process in subsection (a)(2) of this section, the owner or operator of a surface coating process may operate a vapor control system capable of achieving a 90% overall control efficiency, as an alternative to subsection (a) of this section. Control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.455(a)(3) and (4) of this title. If the owner or operator complies with the overall control efficiency option under this subsection, then the owner or operator is exempt from the application system requirements of subsection (c) of this section.

(c) The owner or operator of any surface coating process subject to this division shall not apply coatings unless one of the following coating application systems is used:

(1) electrostatic application;

(2) high-volume, low-pressure (HVLP) spray;

(3) flow coat;

(4) roller coat;

(5) dip coat;

(6) brush coat or hand-held paint rollers; or

(7) other coating application system capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spray. For the purpose of this requirement, the transfer efficiency of HVLP spray is assumed to be 65%.

(d) The following work practices apply to the owner or operator of each surface coating process subject to this division.

(1) For all coating-related activities including, but not limited to, solvent storage, mixing operations, and handling operations for coatings and coating-related waste materials, the owner or operator shall:

(A) store all VOC-containing coatings and coating-related waste materials in closed containers;

(B) minimize spills of VOC-containing coatings;

(C) convey all coatings in closed containers or pipes;

(D) close mixing vessels and storage containers that contain VOC coatings and other materials except when specifically in use;

(E) clean up spills immediately; and

(F) for automobile and light-duty truck assembly coating processes, minimize VOC emissions from the cleaning of storage, mixing, and conveying equipment.

(2) For all cleaning-related activities including, but not limited to, waste storage, mixing, and handling operations for cleaning materials, the owner or operator shall:

(A) store all VOC-containing cleaning materials and used shop towels in closed containers;

(B) ensure that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials;

(C) minimize spills of VOC-containing cleaning materials;

(D) convey VOC-containing cleaning materials from one location to another in closed containers or pipes;

(E) minimize VOC emissions from cleaning of storage, mixing, and conveying equipment;

(F) clean up spills immediately; and

(G) for metal and plastic parts surface coating processes specified in §115.450(a)(3) - (5) of this title (relating to Applicability and Definitions), minimize VOC emission from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(3) The owner or operator of automobile and light-duty truck assembly surface coating processes shall implement a work practice plan containing procedures to minimize VOC emissions from cleaning activities and purging of coating application equipment. Properties with a work practice plan already in place to comply with requirements specified in 40 Code of Federal Regulations (CFR) §63.3094(b) (as amended through April 20, 2006 (71 FR 20464)), may incorporate procedures for minimizing non-hazardous air pollutant VOC emissions to comply with the work practice plan required by this paragraph.

(e) A surface coating process that becomes subject to subsection (a) of this section by exceeding the exemption limits in §115.451 of this title (relating to Exemptions) is subject to the provisions in subsection (a) of this section even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with subsection (a) of this section and one of the following conditions is met.

(1) The project that caused throughput or emission rate to fall below the exemption limits in §115.451 of this title must be authorized by a permit, permit amendment, standard permit, or permit by rule required by Chapters 106 or 116 of this title (relating to Permits by Rule; and Control of Air Pollution by Permits for New Construction or Modification, respectively). If a permit by rule is available for the

project, the owner or operator shall continue to comply with subsection (a) of this section for 30 days after the filing of documentation of compliance with that permit by rule.

(2) If authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

§115.454. Alternate Control Requirements.

(a) For the owner or operator of a surface coating process subject to this division, 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.

(b) For any surface coating process ~~or processes~~ at a specific property, the executive director may approve requirements different from those in §115.453(a)(1)(C) ~~§115.453(a)(1)(A)~~ of this title (relating to Control Requirements) based upon the executive director's determination that such requirements will result in the lowest

emission rate that is technologically and economically reasonable. When the executive director makes such a determination, the executive director shall specify the date or dates by which such different requirements must be met and shall specify any requirements to be met in the interim. If the emissions resulting from such different requirements equal or exceed 25 tons a year for a property, the determinations for that property must be reviewed every five years. Executive director approval does not necessarily constitute satisfaction of all federal requirements nor eliminate the need for approval by the United States Environmental Protection Agency in cases where specified criteria for determining equivalency have not been clearly identified in applicable sections of this chapter.

§115.455. Approved Test Methods and Testing Requirements.

(a) Approved Test Methods and Testing Requirements. Compliance with the requirements in this division must be determined by applying one or more of the following test methods, as appropriate. As an alternative to the test methods in paragraph (1) of this subsection, the volatile organic compounds (VOC) content of coatings and, if necessary dilution solvent, may be determined by using analytical data from the material safety data sheet ~~coating and, if necessary dilution solvent, material safety data sheets (MSDS)~~.

(1) The owner or operator shall demonstrate compliance with the VOC limits in §115.453 of this title (relating to Control Requirements), by applying the following test methods, as appropriate. Where a test method also inadvertently measures compounds that are exempt solvent ~~solvents~~, an owner or operator may exclude the ~~these~~ exempt solvent ~~solvents~~ when determining compliance with a VOC limit. The methods include:

(A) Method 24 (40 Code of Federal Regulations (CFR) Part 60, Appendix A);

(B) American Society for Testing and Materials (ASTM) Test Methods D1186-06.01, D1200-06.01, D3794-06.01, D2832-69, D1644-75, and D3960-81 ~~D 1186-06.01, D 1200-06.01, D 3794-06.01, D 2832-69, D 1644-75, and D 3960-81~~;

(C) the United States Environmental Protection Agency (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;

(D) additional test procedures described in 40 CFR §60.446 (as amended through October 17, 2000 (65 FR 61761)); and

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

(2) The owner or operator shall determine compliance with the VOC limits for automobile and light-duty truck assembly coating processes in §115.453(a)(3) of this title by applying the following test methods in addition to paragraph (1) of this subsection, as appropriate. The methods include:

(A) Protocol for Determining the Daily VOC Emission Rate of Automobile and Light-Duty Truck Topcoat Operations (EPA-453/R-08-002);

(B) the procedure contained in subparagraph (A) of this paragraph for determining daily compliance with the alternative emission limitation in §115.453(a)(3) of this title for final repair. Calculation of occurrence weighted average for each combination of repair coatings (primer, specific basecoat, clearcoat) must be determined by the following procedure;

(i) the relative occurrence weighted usage calculated as follows for each repair coating ~~material~~:

Figure: 30 TAC §115.455(a)(2)(B)(i)

~~Figure: 30 TAC §115.455(a)(2)(B)(i)~~

$$U_P = T_P\left(\frac{100}{S_P}\right)$$

$$U_B = T_B\left(\frac{100}{S_B}\right)$$

$$U_C = T_C\left(\frac{100}{S_C}\right)$$

Where:
U_P = The relative primer usage in gallons of primer per square inch of solids applied.
T_P = The target dry film thickness of the primer in mils (0.001 inch).
S_P = The volume percentage of solids in the primer, minus water and exempt solvent ~~solvents~~.
U_B = The relative basecoat usage in gallons of basecoat per square inch of solids applied.
T_B = The target dry film thickness of the basecoat in mils (0.001 inch).
S_B = The volume percentage of solids in the basecoat, minus water and exempt solvent ~~solvents~~.
U_C = The relative clearcoat usage in gallons of clearcoat per square inch of solids applied.
T_C = The target dry film thickness of the clearcoat in mils (0.001 inch).
S_C = The volume percentage of solids in the clearcoat, minus water and exempt solvent ~~solvents~~.

(ii) the occurrence weighted average (Q) in pounds of VOC ~~volatile organic compounds (VOC)~~ per gallon of coating (minus water and exempt solvents) as applied, for each potential combination of repair coatings calculated according to this subparagraph;

Figure: 30 TAC §115.455(a)(2)(B)(ii)

~~Figure: 30 TAC §115.455(a)(2)(B)(ii)~~

$$Q = \frac{(U_P \times V_P) + (U_B \times V_B) + (U_C \times V_C)}{(U_P) + (U_B) + (U_C)}$$

Where:
Q = The occurrence weighted average in pounds of volatile organic compounds (VOC) per gallon of coating (minus water and exempt solvent ~~solvents~~) as applied.
U_P = The relative primer usage in gallons of primer per square inch of solids applied.
V_P = The VOC content of the primer in pounds per gallon.
U_B = The relative basecoat usage in gallons of basecoat per square inch of solids applied.
V_B = The VOC content of the basecoat in pounds per gallon.
U_C = The relative clearcoat usage in gallons of clearcoat per square inch of solids applied.
V_C = The VOC content of the clearcoat in pounds per gallon.

(C) the procedure contained in 40 CFR Part 63, Subpart PPPP, Appendix A (as amended through April 24, 2007 (72 FR 20237)), for reactive adhesives; and

(D) the procedure contained in 40 CFR Part 60, Subpart MM (as amended October 17, 2000 (65 FR 61760)) for determining the monthly weighted average for electrodeposition primer.

(3) The owner or operator shall determine compliance with the vapor control system requirements in §115.453 of this title by applying the following test methods, as appropriate:

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

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

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

(D) additional performance test procedures described in 40 CFR §60.444 (as amended through October 18, 1983 (48 FR 48375)); or

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

(4) The owner or operator of a surface coating process subject to §115.453(a)(5) or (b) of this title shall measure the capture efficiency using applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; and Procedure F.2 - Fugitive VOC Emissions from Building Enclosures.

(A) The following exemptions apply to capture efficiency testing requirements.

(i) If a source installs a permanent total enclosure that meets the specifications of Procedure T and that directs all VOC to a control device, then the capture efficiency is assumed to be 100%, and the source is exempted from capture efficiency testing requirements. This does not exempt the source from performance of any control device efficiency testing that may be required. In addition, a source must

demonstrate all criteria for a permanent total enclosure are met during testing for control efficiency.

(ii) If a source uses a vapor control system designed to collect and recover VOC (e.g., carbon adsorption system), an explicit measurement of capture efficiency is not necessary if the following conditions are met. The overall control of the system can be determined by directly comparing the input liquid VOC to the recovered liquid VOC. The general procedure for use in this situation is given in 40 CFR §60.433 (as amended through October 17, 2000 (65 FR 61761)), with the following additional restrictions.

(I) The source must be able to equate solvent usage with solvent recovery on a 24-hour (daily) basis, rather than a 30-day weighted average. This verification must be done within 72 hours following each 24-hour period of the 30-day period.

(II) The solvent recovery system (i.e., capture and control system) must be dedicated to a single process line (e.g., one process line venting to a carbon adsorber system); or if the solvent recovery system controls multiple process lines, the source must be able to demonstrate that the overall control (i.e., the total recovered solvent VOC divided by the sum of liquid VOC input to all process lines

venting to the control system) meets or exceeds the most stringent standard applicable for any process line venting to the control system.

(B) The capture efficiency must be calculated using one of the following protocols referenced. Any affected source must use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the EPA.

(i) Gas/gas method using temporary total enclosure (TTE). The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.455(a)(4)(B)(i)

$$CE = \frac{G_W}{(G_W + F_W)}$$

Where:
CE = The capture efficiency, decimal fraction.
G_W = The mass of volatile organic compounds (VOC) captured and delivered to control device using a temporary total enclosure (TTE) (use Procedure G.2).
F_W = The mass of fugitive VOC that escapes from a TTE (use Procedure F.1).

(ii) Liquid/gas method using TTE. The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.455(a)(4)(B)(ii)

$$CE = \frac{(L - F)}{L}$$

Where:
CE = The capture efficiency, decimal fraction.
L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).
F = The mass of fugitive VOC that escapes from a temporary total enclosure (TTE) (use Procedure F.1).

(iii) Gas/gas method using the building or room enclosure (BE) in which the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from BE are measured while operating only the affected facility. All fans and blowers in the BE must be operating as they would under normal production. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.455(a)(4)(B)(iii)

$$CE = \frac{G}{(G + F_B)}$$

Where:
CE = The capture efficiency, decimal fraction.
G = The mass of volatile organic compounds (VOC) captured and delivered to a control device (use Procedure G.2).
F_B = The mass of fugitive VOC that escapes from building enclosure (use Procedure F.2).

(iv) Liquid/gas method using a BE in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from BE are measured while operating only the affected facility. All fans and blowers in the building or room must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.455(a)(4)(B)(iv)

$$CE = \frac{L}{F_B - L}$$

Where:
CE = The capture efficiency, decimal fraction.
L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).
F_B = The mass of fugitive VOC that escapes from building or room enclosure (use Procedure F.2).

(C) The operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.458(a) of this title (relating to Monitoring and Recordkeeping Requirements) must be monitored and recorded during the initial capture efficiency test and thereafter during facility operation. The executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test.

(5) Test methods other than those specified in paragraphs (1) - (4) of this subsection may be used if approved by the executive director and validated by Method 301 (40 CFR Part 63, Appendix A). For the purposes of this paragraph, substitute "executive director" each place that Method 301 references "administrator."

(b) Inspection requirements. The owner or operator of each surface coating process subject to §115.453 of this title shall provide samples, without charge, upon request by authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction. The representative or inspector requesting the sample will determine the amount of coating needed to test the sample to determine compliance.

§115.458. Monitoring and Recordkeeping Requirements.

(a) Monitoring requirements. The following monitoring requirements apply to the owner or operator of a surface coating process subject to this division that uses a vapor control system in accordance with §115.453 of this title (relating to Control Requirements). The owner or operator shall install and maintain monitors to accurately measure and record operational parameters of all required control devices~~, as necessary,~~ to ensure the proper functioning of those devices in accordance with design specifications, including:

(1) continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed;

(2) the total amount of volatile organic compounds (VOC) recovered by carbon adsorption or other solvent recovery systems during a calendar month;

(3) continuous monitoring of carbon adsorption bed exhaust; and

(4) appropriate operating parameters for capture systems and control devices other than those specified in paragraphs (1) - (3) of this subsection.

(b) Recordkeeping requirements. The following recordkeeping requirements apply to the owner or operator of a surface coating process subject to this division.

(1) The owner or operator shall maintain records of the testing data or the material safety data sheets (MSDS) in accordance with the requirements in §115.455(a) of this title (relating to Approved Test Methods and Testing Requirements). The MSDS must document relevant information regarding each coating and solvent available for use in the affected surface coating processes including the VOC content, composition, solids content, and solvent density. Records must be sufficient to demonstrate continuous compliance with the VOC limits in §115.453(a) of this title.

(2) Records must be maintained of the quantity and type of each coating and solvent consumed during the specified averaging period if any of the coatings, as delivered to the coating application system, exceed the applicable VOC limits. Such records must be sufficient to calculate the applicable weighted average of VOC content for all coatings.

(3) As an alternative to the recordkeeping requirements of paragraph (2) of this subsection, the owner or operator that qualifies for exemption under §115.451(a)(3) ~~§115.451(1)(C)~~ of this title (relating to Exemptions) may maintain records

of the total gallons of coating and solvent used in each month and total gallons of coating and solvent used in the previous 12 months.

(4) The owner or operator shall maintain, on file, the capture efficiency protocol submitted under §115.455(a)(4) of this title. The owner or operator shall submit all results of the test methods and capture efficiency protocols to the executive director within 60 days of the actual test date. The owner or operator shall maintain records of the capture efficiency operating parameter values on-site for a minimum of one year. If any changes are made to capture or control equipment, the owner or operator is required to notify the executive director in writing within 30 days of these changes and a new capture efficiency or control device destruction or removal efficiency test may be required.

(5) The owner or operator claiming an exemption in §115.451 of this title shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria.

~~(6) Except for specialty coatings, compliance with the recordkeeping requirements of 40 Code of Federal Regulations §63.752 (as amended through September 1, 1998 (63 FR 46534)) (National Emission Standards for Aerospace~~

~~Manufacturing and Rework Facilities), is considered to represent compliance with the requirements of this section.~~

(6) ~~(7)~~ Records must be maintained of any testing conducted in accordance with the provisions specified in §115.455(a) of this title.

(7) ~~(8)~~ Records must be maintained a minimum of two years and be made available upon request to authorized representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution agency with jurisdiction.

§115.459. Compliance Schedules.

(a) The owner or operator of a surface coating process subject to this division shall comply with the requirements of this division no later than March 1, 2013.

(b) The owner or operator of a ~~each~~ surface coating process that becomes subject to this division on or after March 1, 2013, ~~the date specified in subsection (a) of this section,~~ shall comply with the requirements in this division no later than 60 days after becoming subject.

SUBCHAPTER E: SOVLENT-USING PROCESSES
DIVISION 6: INDUSTRIAL CLEANING SOLVENTS
§§115.460, 115.461, 115.463 - 115.465, 115.468, 115.469

Statutory Authority

The new sections are adopted under Texas Water Code (TWC), §5.102, concerning General Powers, that provides the commission with the general powers to carry out its duties under the TWC; TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC; TWC, §5.105, concerning General Policy, that authorizes the commission by rule to establish and approve all general policy of the commission; and under Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The new sections are also adopted under THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the proper control of the state's air. The new sections are also adopted under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, that authorizes the commission to prescribe reasonable requirements for the measuring and monitoring of air contaminant emissions; and §382.021, concerning Sampling Methods and

Procedures, that authorizes the commission to prescribe the sampling methods and procedures to determine compliance with its rules. The new sections are also adopted under Federal Clean Air Act (FCAA), 42 United States Code (USC), §§7401, *et seq*., which requires states to submit state implementation plan revisions that specify the manner in which the National Ambient Air Quality Standards will be achieved and maintained within each air quality control region of the state.

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

§115.460. Applicability and Definitions.

(a) Applicability. Except as specified in §115.461 of this title (relating to Exemptions), the requirements in this division apply to solvent cleaning operations in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions). Residential cleaning and janitorial cleaning are ~~is~~ not considered ~~a~~ solvent cleaning operations ~~operation~~.

(b) Definitions. Unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10 of this title (relating to Definitions), the terms in this division have the meanings commonly used in the field of

air pollution control. In addition, the following meanings apply in this division unless the context clearly indicates otherwise.

(1) **Aerosol can**--A hand-held, non-refillable container that expels pressurized product by means of a propellant-induced force.

(2) **Electrical and electronic components**--Components and assemblies of components that generate, convert, transmit, or modify electrical energy. Electrical and electronic components include, but are not limited to, wires, windings, stators, rotors, magnets, contacts, relays, printed circuit boards, printed wire assemblies, wiring boards, integrated circuits, resistors, capacitors, and transistors. Cabinets that house electrical and electronic components are not considered electrical and electronic components.

(3) **Janitorial cleaning**--The cleaning of building or building components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, bathrooms, furnishings, and exterior surfaces of office equipment, excluding the cleaning of work areas where manufacturing or repair activity is performed.

(4) **Magnet wire**--Wire used in electromagnetic field application in electrical machinery and equipment such as transformers, motors, generators, and magnetic tape recorders.

(5) **Magnet wire coating operation**--The process of applying insulation coatings such as varnish or enamel on magnet wire where wire is continuously drawn through a coating applicator.

(6) **Medical device**--An instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar article, including any component or accessory that is, intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of diseases; intended to affect the structure or any function of the body; or defined in the National Formulary or the United States Pharmacopoeia or any supplement to it.

(7) **Medical device and pharmaceutical preparation operations**--Medical devices, pharmaceutical products, and associated manufacturing and product handling equipment and material, work surfaces, maintenance tools, and room surfaces that are subject to the United States Federal Drug Administration current Good Manufacturing/Laboratory Practice, or Center for Disease Control or National Institute of Health guidelines for biological disinfection of surfaces.

(8) **Polyester resin operation**--The fabrication, rework, repair, or touch-up of composite products for commercial, military, or industrial uses by mixing, pouring, manual application, molding, impregnating, injecting, forming, spraying, pultrusion, filament winding, or centrifugally casting with polyester resins.

(9) **Precision optics**--The optical elements used in electro-optical devices that are designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes of light energy levels.

(10) **Solvent cleaning operation**--The removal of uncured adhesives, inks, and coatings; and contaminants such as dirt, soil, oil, and grease from parts, products, tools, machinery, equipment, vessels, floors, walls, and other work production-related areas.

(11) **Volatile organic compound (VOC) composite partial pressure**--The sum of the partial pressures of the compounds that meet the definition of VOC in §101.1 of this title (relating to Definitions). The VOC composite partial pressure is calculated as follows.

Figure: 30 TAC §115.460(b)(11)

$$PP_c = \sum_{i-1}^{n} \frac{\left(\frac{W_i}{MW_i} \times Vp_i\right)}{\frac{W_w}{MW_w} + \sum_{e-1}^{n} \frac{W_e}{MW_e} + \sum_{i-1}^{n} \frac{W_i}{MW_i}}$$

Where:

PP_c = The volatile organic compound (VOC) composite partial vapor pressure of a solution at 20 degrees Celsius in millimeters of mercury (mmHg).

W_i = The weight of VOC i in grams (g).

MW_i = The molecular weight of VOC i in g per g-mole.

VP_i = The vapor pressure of VOC i at 20 degrees Celsius in mmHg.

W_w = The weight of water in g.

MW_w = The molecular weight of water in g per g-mole.

W_e = The weight of non-water exempt compound e in g.

MW_e = The molecular weight of non-water exempt compound e in g per g-mole.

§115.461. Exemptions.

(a) Solvent cleaning operations located on a property with total actual volatile organic compounds (VOC) emissions of less than 3.0 tons per calendar year from all cleaning solvents, when uncontrolled, are exempt from the requirements of this division, except as specified in §115.468(b)(2) of this title (relating to Monitoring and

Recordkeeping Requirements). When calculating the VOC emissions, solvents used for cleaning operations that are exempt from this division under subsections (b) - (e) of this section are excluded.

(b) The owner or operator of any process or operation subject to another division of this chapter that specifies solvent cleaning operation requirements related to that process or operation is exempt from the requirements in this division.

(c) A solvent cleaning operation is exempt from this division if:

(1) the process or operation that the solvent cleaning operation is associated with is subject to another division in this chapter; and

(2) the VOC emissions from the solvent cleaning operation are controlled in accordance with an emission specification or control requirement of the division that the process or operation is subject to.

(d) ~~(c)~~ The following are exempt from the VOC limits in §115.463(a) ~~§115.463(1)~~ of this title (relating to Control Requirements):

(1) electrical and electronic components;

(2) precision optics;

(3) numisimatic dies;

(4) resin mixing, molding, and application equipment;

(5) coating, ink, and adhesive mixing, molding, and application equipment;

(6) stripping of cured inks, cured adhesives, and cured coatings;

(7) research and development laboratories;

(8) medical device or pharmaceutical preparation operations;

(9) performance or quality assurance testing of coatings, inks, or adhesives;

(10) architectural coating manufacturing and application operations;

(11) magnet wire coating operations;

(12) semiconductor wafer fabrication;

(13) coating, ink, resin, and adhesive manufacturing;

(14) polyester resin operations;

(15) flexographic and rotogravure printing processes;

(16) screen printing operations; and

(17) digital printing operations.

(e) ~~(d)~~ Cleaning solvents supplied in aerosol cans are exempt from the VOC limits in §115.463(a) ~~§115.463(1)~~ of this title if total use for the property is less than 160 fluid ounces per day.

§115.463. Control Requirements.

~~The following control requirements apply to the owner or operator of a solvent cleaning operation subject to this division.~~

(a) ~~(1)~~ The owner or operator shall limit the volatile organic compounds (VOC) content of cleaning solutions to:

(1) ~~(A)~~ 0.42 pound of VOC per gallon of solution (lb VOC/gal solution), as applied; or

(2) ~~(B)~~ limit the composite partial vapor pressure of the cleaning solution to 8.0 millimeters of mercury at 20 degrees Celsius (68 degrees Fahrenheit) ~~68 degrees Fahrenheit (20 degrees Celsius)~~.

(b) ~~(2)~~ As an alternative to subsection (a) ~~paragraph (1)~~ of this section, the owner or operator shall operate a vapor control system capable of achieving an overall control efficiency of 85% by mass. Control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.465 of this title (relating to Approved Test Methods and Testing Requirements).

(c) ~~(3)~~ The owner or operator of a solvent cleaning operation shall implement the following work practices during the handling, storage, and disposal of cleaning solvents and shop towels:

(1) ~~(A)~~ cover open containers and used applicators;

(2) ~~(B)~~ minimize air circulation around solvent cleaning operations;

(3) ~~(C)~~ properly dispose of used solvent and shop towels; and

(4) ~~(D)~~ implement equipment practices that minimize emissions (e.g. maintaining cleaning equipment to repair solvent leaks).

(d) ~~(4)~~ A solvent cleaning operation that becomes subject to subsection (a) ~~paragraph (1)~~ of this section by exceeding the exemption limits in §115.461 of this title (relating to Exemptions) is subject to the provisions in subsection (a) ~~paragraph (1)~~ of this section even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with subsection (a) ~~paragraph (1)~~ of this section and one of the following conditions is met.

(A) The project that caused throughput or emission rate to fall below the exemption limits in §115.461 of this title must be authorized by a permit, permit amendment, 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, respectively). If a permit by rule is available for the project, the owner or operator shall continue to comply with subsection (a) ~~paragraph (1)~~ of this section for 30 days after the filing of documentation of compliance with that permit by rule.

(B) If authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

§115.464. Alternate Control Requirements.

For ~~cleaning~~ solvent cleaning operations subject to §115.463 of this title (relating to 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.

§115.465. Approved Test Methods and Testing Requirements.

The owner or operator shall demonstrate compliance with the control requirements in §115.463 of this title (relating to Control Requirements) by applying the following test methods, as appropriate. ~~Where a test method also inadvertently measures compounds that are exempt solvents, an owner or operator may exclude these exempt solvents when determining compliance with a volatile organic compounds (VOC) content limit.~~

(1) Compliance with the volatile organic compound (VOC) limits in §115.463(a) of this title must be determined by the following methods, as applicable: ~~VOC content limits in §115.463(1) of this title must be determined by using Method 24 (40 Code of Federal Regulations (CFR) Part 60, Appendix A). As an alternative to Method 24, compliance with the VOC content limits in §115.463(1) of this title may be determined by using analytical data from the material safety data sheet.~~

(A) Method 24 (40 Code of Federal Regulations (CFR) Part 60, Appendix A);

(B) American Society for Testing and Materials Method D2879, Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope to demonstrate compliance with §115.463(a)(2) of this title;

(C) using standard reference texts for the true vapor pressure of each VOC component to demonstrate compliance with §115.463(a)(2) of this title; or

(D) using analytical data from the cleaning solvent supplier or manufacturer's material safety data sheet.

(2) The owner or operator subject to §115.463(b) ~~§115.463(2)~~ of this title shall measure the capture efficiency using applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; and Procedure F.2-Fugitive VOC Emissions from Building Enclosures.

(A) The following exemptions apply to capture efficiency testing requirements.

(i) If a source installs a permanent total enclosure that meets the specifications of Procedure T and that directs all VOC to a control device, then the capture efficiency is assumed to be 100%, and the source is exempted from capture efficiency testing requirements. This does not exempt the source from performance of any control device efficiency testing that may be required. In addition, a source must demonstrate all criteria for a permanent total enclosure are met during testing for control efficiency.

(ii) If a source uses a vapor control system designed to collect and recover VOC (e.g., carbon adsorption system), an explicit measurement of capture efficiency is not necessary if the following conditions are met. The overall control of the system can be determined by directly comparing the input liquid VOC to the recovered liquid VOC. The general procedure for use in this situation is given in 40 CFR §60.433 (as amended through October 17, 2000 (65 FR 61761)), with the following additional restrictions.

(I) The source must be able to equate solvent usage with solvent recovery on a 24-hour (daily) basis, rather than a 30-day weighted average.

This verification must be done within 72 hours following each 24-hour period of the 30-day period.

(II) The solvent recovery system (i.e., capture and control system) must be dedicated to a single process line (e.g., one process line venting to a carbon adsorber system) or if the solvent recovery system controls multiple process lines, the source must be able to demonstrate that the overall control (i.e., the total recovered solvent VOC divided by the sum of liquid VOC input to all process lines venting to the control system) meets or exceeds the most stringent standard applicable for any process line venting to the control system.

(B) The capture efficiency must be calculated using one of the following protocols referenced. Any affected source must use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the United States Environmental Protection Agency (EPA).

(i) Gas/gas method using temporary total enclosure (TTE). The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.465(2)(B)(i)

$$CE = \frac{G_W}{(G_W + F_W)}$$

Where:
CE = The capture efficiency, decimal fraction.
G_W = The mass of volatile organic compounds (VOC) captured and delivered to control device using a temporary total enclosure (TTE) (use Procedure G.2).
F_W = The mass of fugitive VOC that escapes from a TTE (use Procedure F.1).

(ii) Liquid/gas method using TTE. The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.465(2)(B)(ii)

$$CE = \frac{(L - F)}{L}$$

Where:
CE = The capture efficiency, decimal fraction.
L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).
F = The mass of fugitive VOC that escapes from a temporary total enclosure (use Procedure F.1).

(iii) Gas/gas method using the building or room enclosure (BE) in which the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from the BE are measured while operating only the affected facility. All fans and blowers in the BE must be operating as they would under normal production. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.465(2)(B)(iii)

$$CE = \frac{G}{(G + F_B)}$$

Where:
CE = The capture efficiency, decimal fraction.
G = The mass of volatile organic compounds (VOC) captured and delivered to a control device (use Procedure G.2).
F_B = The mass of fugitive VOC that escapes from building or room enclosure (use Procedure F.2).

(iv) Liquid/gas method using a BE in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from the BE are measured while operating only the affected facility. All fans and blowers in the BE must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.465(2)(B)(iv)

$$CE = \frac{L}{F_B - L}$$

Where:
CE = The capture efficiency, decimal fraction.
L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).
F_B = The mass of fugitive VOC that escapes from a building or room enclosure (use Procedure F.2).

(C) The operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.468(a) of this title (relating to Monitoring and Recordkeeping Requirements) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. The executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test.

(3) In addition to the requirements of paragraph (2) of this section, the owner or operator shall determine compliance with §115.463(b) ~~§115.463(2)~~ of this title by applying the following test methods, as appropriate:

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

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

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

(D) additional performance test procedures described in 40 CFR §60.444 (as amended through October 18, 1983 (48 FR 48375)). ~~; and~~

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

(4) Minor modifications to the methods in paragraphs (1) - (3) of this section maybe approved by the executive director. Methods other than those specified in paragraphs (1) - (3) of this section may be used if approved by the executive director and validated using Method 301 (40 CFR Part 63, Appendix A). For the purposes of this

paragraph, substitute "executive director" each place that Method 301 references "administrator."

§115.468. Monitoring and Recordkeeping Requirements.

(a) Monitoring requirements. The following monitoring requirements apply to the owner or operator of a solvent cleaning operation subject to this division that uses a vapor control system in accordance with §115.463(b) ~~§115.463(2)~~ of this title (relating to Control Requirements). The owner or operator shall install and maintain monitors to accurately measure and record operational parameters of all required control devices, as necessary, to ensure the proper functioning of those devices in accordance with design specifications, including:

(1) continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed;

(2) the total amount of volatile organic compounds (VOC) recovered by carbon adsorption or other solvent recovery systems during a calendar month;

(3) continuous monitoring of carbon adsorption bed exhaust; and

(4) appropriate operating parameters for vapor control systems other than those specified in paragraphs (1) - (3) of this subsection.

(b) Recordkeeping requirements. The following recordkeeping requirements apply to the owner or operator of a solvent cleaning operation subject to this division.

(1) The owner or operator shall maintain records of the testing data, ~~or~~ the material safety data sheet, or documentation of the standard reference texts used to determine the true vapor pressure of each VOC component, in accordance with the requirements in §115.465(1) of this title (relating to Approved Test Methods and Testing Requirements). The concentration of all VOC used to prepare the cleaning solution and, if diluted prior to use, the proportions that each of these materials is used must be recorded. Records must be sufficient to demonstrate continuous compliance with the VOC limits in §115.463(a) ~~§115.463(1)~~ of this title.

(2) The owner or operator claiming an exemption in §115.461 of this title (relating to Exemptions) shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria.

(3) The owner or operator claiming exemption from this division in accordance with §115.461(c) of this title shall maintain records indicating the applicable division the process or operation is subject to as specified in §115.461(c)(1) of this title and the control requirements or emission specifications used to control the VOC emissions from the solvent cleaning operation as specified in §115.461(c)(2) of this title. The owner or operator shall also comply with the applicable recordkeeping requirements from the division the process or operation is subject to sufficient to demonstrate that the VOC emissions from the solvent cleaning operation are controlled in accordance with the control requirements or emission specifications of that division.

(4) ~~(3)~~ The owner or operator shall maintain records of any testing conducted in accordance with the provisions specified in §115.465(2) - (4) ~~§115.465(2) and (3)~~ of this title.

(5) ~~(4)~~ Records must be maintained a minimum of two years and be made available upon request to authorized representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution agency with jurisdiction.

§115.469. Compliance Schedules.

(a) The owner or operator of a solvent cleaning operation subject to this division shall comply with the requirements in this division no later than March 1, 2013.

(b) The owner or operator of a solvent cleaning operation that becomes subject to this division on or after March 1, 2013, shall comply with the requirements in this division no later than 60 days after becoming subject.

SUBCHAPTER E: SOLVENT-USING PROCESSES
DIVISION 7: MISCELLANEOUS INDUSTRIAL ADHESIVES
§§115.470, 115.471, 115.473, - 115.475, 115.478, 115.479

Statutory Authority

The new sections are adopted under Texas Water Code (TWC), §5.102, concerning General Powers, that provides the commission with the general powers to carry out its duties under the TWC; TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC; TWC, §5.105, concerning General Policy, that authorizes the commission by rule to establish and approve all general policy of the commission; and under Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The new sections are also adopted under THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; THSC, §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and THSC, §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the proper control of the state's air. The new sections are also adopted under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, that authorizes the commission to prescribe reasonable requirements for the measuring and monitoring of air contaminant emissions; and THSC, §382.021, concerning Sampling

Methods and Procedures, that authorizes the commission to prescribe the sampling methods and procedures to determine compliance with its rules. The new sections are also adopted under Federal Clean Air Act (FCAA), 42 United States Code (USC), §§7401, *et seq*., which requires states to submit state implementation plan revisions that specify the manner in which the National Ambient Air Quality Standards will be achieved and maintained within each air quality control region of the state.

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

§115.470. Applicability and Definitions.

(a) Applicability. Except as specified in §115.471 of this title (relating to Exemptions), the requirements in this division apply to the owner or operator of a manufacturing operation ~~or repair facility~~ using adhesives or adhesive primers for any of the ~~adhesive~~ application processes specified in §115.473(a) of this title (relating to Control Requirements) in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions). Adhesives or adhesive primers applied in the field (e.g., construction jobs in the field) are not subject to this division.

(b) Definitions. Unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10 of this title (relating to Definitions), the terms in this division have the meanings commonly used in the field of air pollution control. In addition, the following meanings apply in this division unless the context clearly indicates otherwise.

(1) **Acrylonitrile-butadiene-styrene or ABS welding**--Any process to weld acrylonitrile-butadiene-styrene pipe.

(2) **Adhesive**--Any chemical substance applied for the purpose of bonding two surfaces together other than by mechanical means.

(3) **Adhesive primer**--Any product intended by the manufacturer for application to a substrate, prior to the application of an adhesive, to provide a bonding surface.

(4) **Aerosol adhesive or adhesive primer**--An adhesive or adhesive primer packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment.

(5) **Aerospace component**--Any fabricated part, processed part, assembly of parts, or completed unit of any aircraft including but not limited to airplanes, helicopters, missiles, rockets, and space vehicles. This definition includes electronic components.

(6) **Application process**--A series of one or more application systems and any associated drying area or oven where an adhesive or adhesive primer is applied, dried, or cured. An application process ends at the point where the adhesive is dried or cured, or prior to any subsequent application of a different adhesive. It is not necessary for an application process to have an oven or flash-off area.

(7) ~~(5)~~ **Application system**--Devices or equipment designed for the purpose of applying an adhesive or adhesive primer to a surface. The devices may include, but are not be limited to, brushes, sprayers, flow coaters, dip tanks, rollers, and extrusion coaters.

(8) ~~(6)~~ **Ceramic tile installation adhesive**--Any adhesive intended by the manufacturer for use in the installation of ceramic tiles.

(9) ~~(7)~~ **Chlorinated polyvinyl chloride plastic or CPVC plastic welding**--A polymer of the vinyl chloride monomer that contains 67% chlorine and is normally identified with a chlorinated polyvinyl chloride marking.

(10) ~~(8)~~ **Chlorinated polyvinyl chloride welding or CPVC welding**--An adhesive labeled for welding of chlorinated polyvinyl chloride.

(11) ~~(9)~~ **Contact adhesive**--An adhesive:

(A) designed for application to both surfaces to be bonded together;

(B) allowed to dry before the two surfaces are placed in contact with each other;

(C) forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other;

(D) does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces; and

(E) does not include rubber cements that are primarily intended for use on paper substrates or vulcanizing fluids that are designed and labeled for tire repair only.

(12) ~~(10)~~ **Cove base**--A flooring trim unit, generally made of vinyl or rubber, having a concave radius on one edge and a convex radius on the opposite edge that is used in forming a junction between the bottom wall course and the floor or to form an inside corner.

(13) ~~(11)~~ **Cove base installation adhesive**--Any adhesive intended by the manufacturer to be used for the installation of cove base or wall base on a wall or vertical surface at floor level.

(14) ~~(12)~~ **Cyanoacrylate adhesive**--Any adhesive with a cyanoacrylate content of at least 95% by weight.

(15) ~~(13)~~ **Daily weighted average**--The total weight of volatile organic compounds (VOC) emissions from all adhesives or ~~and~~ adhesive primers subject to the same VOC content limit in §115.473(a) of this title (relating to Control Requirements), divided by the total volume of those adhesives or adhesive primers (minus water and exempt solvent) delivered to the application system each day. Adhesives or adhesive

primers ~~Coatings~~ subject to different emission standards in §115.473(a) of this title must not be combined for purposes of calculating the daily weighted average. In addition, determination of compliance is based on each adhesive or adhesive primer application process.

(16) ~~(14)~~ **Ethylene propylenediene monomer (EPDM) roof membrane**--A prefabricated single sheet of elastomeric material composed of ethylene propylenediene monomer and that is field-applied to a building roof using one layer or membrane material.

(17) ~~(15)~~ **Flexible vinyl**--Non-rigid polyvinyl chloride plastic with a 5.0% by weight plasticizer content.

(18) ~~(16)~~ **Indoor floor covering installation adhesive**--Any adhesive intended by the manufacturer for use in the installation of wood flooring, carpet, resilient tile, vinyl tile, vinyl-backed carpet, resilient sheet and roll, or artificial grass. Adhesives used to install ceramic tile and perimeter-bonded sheet flooring with vinyl backing onto a non-porous substrate, such as flexible vinyl, are excluded from this definition.

(19) ~~(17)~~ **Laminate**--A product made by bonding together two or more layers of material.

(20) ~~(18)~~ **Metal to urethane/rubber molding or casting adhesive**--Any adhesive intended by the manufacturer to bond metal to high density or elastomeric urethane or molded rubber materials, in heater molding or casting processes, to fabricate products such as rollers for computer printers or other paper handling equipment.

(21) ~~(19)~~ **Motor vehicle adhesive**--An adhesive, including glass-bonding adhesive, used in a process that is not an automobile or light-duty truck assembly coating process, applied for the purpose of bonding two vehicle surfaces together without regard to the substrates involved.

(22) ~~(20)~~ **Motor vehicle glass-bonding primer**--A primer, used in a process that is not an automobile or light-duty truck assembly coating process, applied to windshield or other glass, or to body openings, to prepare the glass or body opening for the application of glass-bonding adhesives or the installation of adhesive-bonded glass. Motor vehicle glass-bonding primer includes glass-bonding/cleaning primers that perform both functions (cleaning and priming of the windshield or other glass, or body

openings) prior to the application of adhesive or the installation of adhesive-bonded glass.

(23) ~~(21)~~ **Motor vehicle weatherstrip adhesive**--An adhesive, used in a process that is not an automobile or light-duty truck assembly coating process, applied to weatherstripping materials for the purpose of bonding the weatherstrip material to the surface of the vehicle.

(24) ~~(22)~~ **Multipurpose construction adhesive**--Any adhesive intended by the manufacturer for use in the installation or repair of various construction materials, including but not limited to drywall, subfloor, panel, fiberglass reinforced plastic (FRP), ceiling tile, and acoustical tile.

(25) ~~(23)~~ **Outdoor floor covering installation adhesive**--Any adhesive intended by the manufacturer for use in the installation of floor covering that is not in an enclosure and that is exposed to ambient weather conditions during normal use.

(26) ~~(24)~~ **Panel installation**--The installation of plywood, pre-decorated hardboard or tileboard, fiberglass reinforced plastic, and similar pre-decorated or non-

decorated panels to studs or solid surfaces using an adhesive formulated for that purpose.

(27) ~~(25)~~ **Perimeter bonded sheet flooring installation**--The installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four inches wide around the perimeter of the sheet flooring.

(28) ~~(26)~~ **Plastic solvent welding adhesive**--Any adhesive intended by the manufacturer for use to dissolve the surface of plastic to form a bond between mating surfaces.

(29) ~~(27)~~ **Plastic solvent welding adhesive primer**--Any primer intended by the manufacturer for use to prepare plastic substrates prior to bonding or welding.

(30) ~~(28)~~ **Plastic foam**--Foam constructed of plastics.

(31) ~~(29)~~ **Plastics**--Synthetic materials chemically formed by the polymerization of organic (carbon-based) substances. Plastics are usually compounded

with modifiers, extenders, or reinforcers and are capable of being molded, extruded, cast into various shapes and films, or drawn into filaments.

(32) ~~(30)~~ **Polyvinyl chloride plastic or PVC plastic**--A polymer of the chlorinated vinyl monomer that contains 57% chlorine.

(33) ~~(31)~~ **Polyvinyl chloride welding adhesive or PVC welding adhesive**--Any adhesive intended by the manufacturer for use in the welding of polyvinyl chloride plastic pipe.

(34) ~~(32)~~ **Porous material--**A substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged, including, but not limited to, paper and corrugated paperboard. For the purposes of this definition, porous material does not include wood.

(35) **Pounds of volatile organic compounds (VOC) per gallon of adhesive (minus water and exempt solvent)**--The basis for content limits for application processes that can be calculated by the following equation:

Figure: 30 TAC §115.470(b)(35)

$$\text{Pounds of volatile organic compounds (VOC) per gallon of adhesive (minus water and exempt solvent)} = \frac{W_V}{(V_M - V_W - V_{ES})}$$

Where:

W_V = The weight of VOC contained in V_M gallons of adhesive or adhesive primer measured in pounds.
V_M = The volume of adhesive or adhesive primer, generally assumed to be one gallon.
V_W = The volume of water contained in V_M gallons of adhesive or adhesive primer measured in gallons.
V_{ES} = The volume of exempt solvent contained in V_M gallons of adhesive or adhesive primer measured in gallons.

(36) **Pounds of volatile organic compounds (VOC) per gallon of solids**--The basis for content limits for application processes that can be calculated by the following equation:

Figure: 30 TAC §115.470(b)(36)

$$\text{Pounds of volatile organic compounds (VOC) per gallon of solids} = \frac{W_V}{V_M - V_V - V_W - V_{ES}}$$

Where:
W_V = The weight of VOC contained in V_M gallons of adhesive or adhesive primer measured in pounds.
V_M = The volume of adhesive or adhesive primer, generally assumed to be one gallon.

V_V = The volume of VOC contained in V_M gallons of adhesive or adhesive primer measured in gallons.
V_W = The volume of water contained in V_M gallons of adhesive or adhesive primer measured in gallons.
V_{ES} = The volume of exempt solvent contained in V_M gallons of adhesive or adhesive primer measured in gallons.

(37) ~~(33)~~ **Reinforced plastic composite**--A composite material consisting of plastic reinforced with fibers.

(38) ~~(34)~~ **Rubber**--Any natural or manmade rubber substrate, including, but not limited to, styrene-butadiene rubber, polychloroprene (neoprene), butyl rubber, nitrile rubber, chlorosulfonated polyethylene, and ethylene propylene diene terpolymer.

(39) ~~(35)~~ **Sheet rubber lining installation**--The process of applying sheet rubber liners by hand to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion. These processes ~~operations~~ also include laminating sheet rubber to fabric by hand.

(40) ~~(36)~~ **Single-ply roof membrane**--A prefabricated single sheet of rubber, normally ethylene propylenediene terpolymer, that is field-applied to a building roof using one layer of membrane material. For the purposes of this definition, single-

ply roof membrane does not include membranes prefabricated from ethylene propylenediene monomer.

(41) ~~(37)~~ **Single-ply roof membrane installation and repair adhesive**--Any adhesive labeled for use in the installation or repair of single-ply roof membrane. Installation includes, as a minimum, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes, and ducts that protrude through the membrane. Repair includes gluing the edges of torn membrane together, attaching a patch over a hole, and reapplying flashings to vents, pipes, or ducts installed through the membrane.

(42) ~~(38)~~ **Single-ply roof membrane adhesive primer**--Any primer labeled for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.

(43) ~~(39)~~ **Structural glazing**--A process that includes the application of adhesive to bond glass, ceramic, metal, stone, or composite panels to exterior building frames.

(44) ~~(40)~~ **Subfloor installation**--The installation of subflooring material over floor joists, including the construction of any load-bearing joists. Subflooring is covered by a finish surface material.

(45) ~~(41)~~ **Thin metal laminating adhesive**--Any adhesive intended by the manufacturer for use in bonding multiple layers of metal to metal or metal to plastic in the production of electronic or magnetic components in which the thickness of the bond line(s) is less than 0.25 mil.

(46) ~~(42)~~ **Tire repair**--A process that includes expanding a hole, tear, fissure, or blemish in a tire casing by grinding or gouging, applying adhesive, and filling the hole or crevice with rubber.

(47) **Undersea-based weapon system components**--The fabrication of parts, assembly of parts or completed units of any portion of a missile launching system used on undersea ships.

(48) ~~(43)~~ **Waterproof resorcinol glue**--A two-part resorcinol-resin-based adhesive designed for applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.

§115.471. Exemptions.

(a) The owner or operator of ~~adhesive~~ application processes located on a property with actual combined emissions of volatile organic compounds (VOC) less than 3.0 tons per calendar year, when uncontrolled, from all adhesives, adhesive primers, and solvents used during related cleaning operations, is exempt from the requirements of this division, except as specified in §115.478(b)(2) of this title (relating to Monitoring and Recordkeeping Requirements). When calculating the VOC emissions, adhesives and adhesive primers that are exempt under subsections (b) and (c) of this section are excluded.

(b) The following ~~adhesive and adhesive primer~~ application processes are exempt from the VOC limits in §115.473(a)~~(1)~~ of this title (relating to Control Requirements) and the application system requirements in §115.473(b) of this title ~~(relating to Control Requirements)~~:

(1) adhesives or adhesive primers being tested or evaluated in any research and development, quality assurance, or analytical laboratory;

(2) adhesives or adhesive primers used in the assembly, repair, or manufacture of aerospace components or undersea-based weapon system components ~~weapons systems~~;

(3) adhesives or adhesive primers used in medical equipment manufacturing operations;

(4) cyanoacrylate adhesive application processes;

(5) aerosol adhesive and aerosol adhesive primer application processes;

(6) polyester-bonding putties used to assemble fiberglass parts at fiberglass boat manufacturing properties and at other reinforced plastic composite manufacturing properties; and

(7) processes using adhesives and adhesive primers that are supplied to the manufacturer in containers with a net volume of 16 ounces or less or a net weight of 1.0 pound or less.

(c) The owner or operator of any process or operation subject to another division of this chapter that specifies VOC content limits for adhesives or adhesive primers used

during any of the ~~adhesive~~ application processes listed in §115.473(a) of this title, is exempt from the requirements in this division.

§115.473. Control Requirements.

(a) The owner or operator shall limit volatile organic compounds (VOC) emissions from all adhesives and adhesive primers used during the specified ~~adhesive~~ application processes to the following VOC content limits in pounds of VOC per gallon of adhesive (lb VOC/gal adhesive) (minus water and exempt solvent ~~compounds~~), as delivered to the application system. These limits are based on the daily weighted average of all adhesives or adhesive primers delivered to the ~~adhesive primer or adhesive~~ application system each day. If an adhesive or adhesive primer is used to bond dissimilar substrates together, then the applicable substrate category with the least stringent VOC content limit applies.

Figure: 30 TAC §115.473(a)

~~Figure: 30 TAC §115.473(a)~~

Table 1.

General Adhesive Application Processes	Pounds ~~pounds~~ of volatile organic compounds per gallon adhesive
Reinforced Plastic Composite	1.7
Flexible vinyl	2.1
Metal	0.3
Porous Material (Except Wood)	1.0
Rubber	2.1
Wood	0.3
Other Substrates	2.1

Table 2.

Specialty Adhesive Application Processes	Pounds ~~pounds~~ of volatile organic compounds per gallon adhesive
Ceramic Tile Installation	1.1
Contact Adhesive	2.1
Cove Base Installation	1.3
Floor Covering Installation (Indoor)	1.3
Floor Covering Installation (Outdoor)	2.1
Floor Covering Installation (Perimeter Bonded Sheet Vinyl)	5.5
Metal to Urethane/Rubber Molding or Casting	7.1
Motor Vehicle Adhesive	2.1
Motor Vehicle Weatherstrip Adhesive	6.3
Multipurpose Construction	1.7
Plastic Solvent Welding acrylonitrile butadiene styrene (ABS)	3.3
Plastic Solvent Welding (Except ABS)	4.2
Sheet Rubber Lining Installation	7.1
Single-Ply Roof Membrane Installation/Repair (Except Ethylene Propylene Diene Monomer)	2.1
Structural Glazing	0.8
Thin Metal Laminating	6.5
Tire Repair	0.8

Waterproof Resorcinol Glue	1.4

Table 3.

Adhesive Primer Application Processes	**Pounds of volatile organic compounds per gallon adhesive**
Motor Vehicle Glass-Bonding Primer	7.5
Plastic Solvent Welding Adhesive Primer	5.4
Single-Ply Roof Membrane Adhesive Primer	2.1
Other Adhesive Primer	2.1

(1) The owner or operator shall meet the VOC content limits in this subsection by using one of the following options.

(A) The owner or operator shall apply low-VOC adhesives or adhesive primers.

(B) The owner or operator shall apply ~~low-VOC~~ adhesives or adhesive primers in combination with the operation of a vapor control system.

(2) As an alternative to paragraph (1) of this subsection, the owner or operator may operate a vapor control system capable of achieving an overall control efficiency of 85% of the VOC emissions from adhesives and adhesive primers. Control

device and capture efficiency testing must be performed in accordance with the testing requirements in §115.475(3) and (4) of this title (relating to Approved Test Methods and Testing Requirements). If the owner or operator complies with the overall control efficiency option under this paragraph, then the owner or operator is exempt from the application system requirements of subsection (b) of this section.

(3) An owner or operator applying adhesives or adhesive primers ~~low-VOC coatings~~ in combination with a vapor control system to meet the VOC content limits in paragraph (1) of this subsection, shall use the following equation to determine the minimum overall control efficiency necessary to demonstrate equivalency. Control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.475(3) and (4) of this title.

Figure: 30 TAC §115.473(a)(3)

~~Figure: 30 TAC §115.473(a)(3)~~

Equation 1.

$$S = \frac{C}{\left(1 - \left(\frac{C}{D}\right)\right)}$$

Where:

S = The applicable volatile organic compounds (VOC) emission limit expressed on a pounds of VOC per gallon of solids basis.
C = The applicable VOC content limit from Tables 1 - 3 in §115.473(a) of this title ~~§115.471 of this title (relating to Exemptions)~~ expressed on a pounds of VOC per gallon of ~~coating~~ adhesive basis.
D = An assumed density of 7.36 pounds of VOC per gallon of VOC.

Equation 2.

$$E = \frac{(VOC - S)}{VOC}$$

Where:
E = The required overall control efficiency, decimal fraction.
VOC = The volatile organic compounds (VOC) content of the adhesives or adhesive primers ~~coatings~~ used for each application process ~~on the coating line~~ expressed on a solids basis in pounds of VOC per gallon of solids. The owner or operator may choose to use either a daily weighted average or the maximum VOC content.
S = The applicable VOC emission limit expressed on a pounds of VOC per gallon of solids basis calculated using Equation 1.

(b) The owner or operator of any ~~adhesive~~ application process subject to this division shall not apply adhesives or adhesive primers unless one of the following application systems is used:

(1) electrostatic spray;

(2) high-volume, low-pressure spray (HVLP);

(3) flow coat;

(4) roll coat or hand application, including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application;

(5) dip coat;

(6) airless spray;

(7) air-assisted airless spray; or

(8) other ~~adhesive~~ application system capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spray. For the purpose of this requirement, the transfer efficiency of HVLP spray is assumed to be 65%.

(c) The following work practices apply to the owner or operator of each ~~adhesive or adhesive primer~~ application process subject to this division.

(1) For the storage, mixing, and handling of all adhesives, adhesive primers, thinners, and adhesive-related waste materials, the owner or operator shall:

(A) store all VOC-containing adhesives, adhesive primers, and process-related waste materials in closed containers;

(B) ensure that mixing and storage containers used for VOC-containing adhesives, adhesive primers, and process-related waste materials are kept closed at all times;

(C) minimize spills of VOC-containing adhesives, adhesive primers, and process-related waste materials; and

(D) convey VOC-containing adhesives, adhesive primers, and process-related waste materials from one location to another in closed containers or pipes.

(2) For the storage, mixing, and handling of all surface preparation materials and cleaning materials, the owner or operator shall:

(A) store all VOC-containing cleaning materials and used shop towels in closed containers;

(B) ensure that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials;

(C) minimize spills of VOC-containing cleaning materials;

(D) convey VOC-containing cleaning materials from one location to another in closed containers or pipes; and

(E) minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured ~~capture~~ in closed containers.

(d) An ~~adhesive~~ application process that becomes subject to subsection (a) of this section by exceeding the exemption limits in §115.471(a) of this title (relating to Exemptions) is subject to the provisions in subsection (a) of this section even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with subsection (a) of this section and one of the following conditions is met.

(1) The project that caused a throughput or emission rate to fall below the exemption limits in §115.471(a) of this title must be authorized by a permit, permit amendment, standard permit, or permit by rule required by Chapters 106 or 116 of this title (relating to Permits by Rule; and Control of Air Pollution by Permits for New Construction or Modification, respectively). If a permit by rule is available for the project, the owner or operator shall continue to comply with subsection (a) of this section for 30 days after the filing of documentation of compliance with that permit by rule.

(2) If authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

§115.474. Alternate Control Requirements.

For the owner or operator of an ~~adhesive~~ application process subject to this division, 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.

§115.475. Approved Test Methods and Testing Requirements.

The owner or operator shall demonstrate compliance with the volatile organic compounds (VOC) content limits in §115.473(a) of this title (relating to Control Requirements) by applying the following test methods, as appropriate. Where a test method also inadvertently measures compounds that are exempt solvent ~~solvents~~, an owner or operator may exclude the ~~these~~ exempt solvent ~~solvents~~ when determining compliance with a VOC content limit. As an alternative to the test methods in this section, the VOC content of an adhesive or adhesive primer may be determined by using analytical data from the material safety data sheet.

(1) Except for reactive adhesives, compliance with the VOC content limits in §115.473(a) of this title must be determined using Method 24 (40 Code of Federal Regulations (CFR) Part 60, Appendix A).

(2) Compliance with the VOC content limits for reactive adhesives in §115.473(a) of this title must be determined using 40 CFR Part 63, Subpart PPPP, Appendix A, (as amended through April 24, 2007 (72 FR 20237)).

(3) The owner or operator of an ~~adhesive~~ application process subject to §115.473 of this title shall measure the capture efficiency using the applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; and Procedure F.2 - Fugitive VOC Emissions from Building Enclosures.

(A) The following exemptions apply to capture efficiency testing requirements.

(i) If a source installs a permanent total enclosure that meets the specifications of Procedure T and that directs all VOC to a control device, then the capture efficiency is assumed to be 100%, and the source is exempted from capture efficiency testing requirements. This does not exempt the source from performance of any control device efficiency testing that may be required. In addition, a source must demonstrate all criteria for a permanent total enclosure are met during testing for control efficiency.

(ii) If a source uses a vapor control system designed to collect and recover VOC (e.g., carbon adsorption system), an explicit measurement of capture efficiency is not necessary if the following conditions are met. The overall control efficiency of the system can be determined by directly comparing the input liquid VOC to the recovered liquid VOC. The general procedure for use in this situation is given in 40 CFR §60.433 (as amended through October 17, 2000 (65 FR 61761)), with the following additional restrictions.

(I) The source must be able to equate solvent usage with solvent recovery on a 24-hour (daily) basis, rather than a 30-day weighted average. This verification must be done within 72 hours following each 24-hour period of the 30-day period.

(II) The solvent recovery system (i.e., capture and control system) must be dedicated to a single process line (e.g., one process line venting to a carbon adsorber system) or if the solvent recovery system controls multiple process lines, the source must be able to demonstrate that the overall control efficiency (i.e., the total recovered solvent VOC divided by the sum of liquid VOC input to all process lines venting to the control system) meets or exceeds the most stringent standard applicable for any process line venting to the control system.

(B) The capture efficiency must be calculated using one of the following protocols referenced unless a suitable alternative protocol is approved by the executive director and the United States Environmental Protection Agency (EPA).

(i) Gas/gas method using temporary total enclosure (TTE). The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.475(3)(B)(i)

$$CE = \frac{G_W}{(G_W + F_W)}$$

Where:
CE = The capture efficiency, decimal fraction.
G_W = The mass of volatile organic compounds (VOC) captured and delivered to control device using a temporary total enclosure (TTE) (use Procedure G.2).
F_W = The mass of fugitive VOC that escapes from a TTE (use Procedure F.1).

(ii) Liquid/gas method using TTE. The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.475(3)(B)(ii)

$$CE = \frac{(L - F)}{L}$$

Where:
CE = Capture efficiency, decimal fraction.
L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).
F = The mass of fugitive VOC that escapes from a temporary total enclosure (use Procedure F.1).

(iii) Gas/gas method using the building or room enclosure (BE) in which the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from BE are measured while operating only the affected facility. All fans and blowers in the BE must be operating as they would under normal production. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.475(3)(B)(iii)

$$CE = \frac{G}{(G + F_B)}$$

Where:
CE = Capture efficiency, decimal fraction.
G = The mass of volatile organic compounds (VOC) captured and delivered to a control device (use Procedure G.2).

F_B = The mass of fugitive VOC that escapes from the building or room enclosure (use Procedure F.2).

(iv) Liquid/gas method using a BE in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from BE are measured while operating only the affected facility. All fans and blowers in the BE must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.475(3)(B)(iv)

$$CE = \frac{L}{F_B - L}$$

Where:
CE = The capture efficiency, decimal fraction.
L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).
F_B = The mass of fugitive VOC that escapes from building or room enclosure (use Procedure F.2).

(C) The operating parameters selected for monitoring the capture system for compliance with the requirements in §115.478(a) of this title (relating to Monitoring and Recordkeeping requirements) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. The

executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test.

(4) In addition to the requirements of paragraph (3) of this section, the owner or operator shall determine compliance with §115.473(a)(2) of this title by applying the following test methods, as appropriate:

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

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

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

(D) additional performance test procedures described in 40 CFR §60.444 (as amended through October 18, 1983 (48 FR 48375)). ~~; and~~

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

(5) Minor modifications to the methods in paragraphs (1) - (4) of this section may be approved by the executive director. Methods other than those specified in paragraphs (1) - (4) of this section may be used if approved by the executive director and validated using Method 301 (40 CFR Part 63, Appendix A). For the purposes of this paragraph, substitute "executive director" each place that Method 301 references "administrator."

§115.478. Monitoring and Recordkeeping Requirements.

(a) Monitoring requirements. The following monitoring requirements apply to the owner or operator of an ~~adhesive~~ application process subject to this division that uses a vapor control system in accordance with §115.473(a)(2) of this title (relating to Control Requirements). The owner or operator shall install and maintain monitors to accurately measure and record operational parameters of all required control devices, as necessary, to ensure the proper functioning of those devices in accordance with design specifications, including:

(1) continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed;

(2) the total amount of volatile organic compounds (VOC) recovered by carbon adsorption or other solvent recovery systems during a calendar month;

(3) continuous monitoring of carbon adsorption bed exhaust; and

(4) appropriate operating parameters for vapor control systems other than those specified in paragraphs (1) - (3) of this subsection.

(b) Recordkeeping requirements. The following recordkeeping requirements apply to the owner or operator of an ~~adhesive~~ application process subject to this division.

(1) The owner or operator shall maintain records of the testing data or the material safety data sheet~~,~~ in accordance with the requirements in §115.475(1) of this title (relating to Approved Test Methods and Testing Requirements). Records must be sufficient to demonstrate continuous compliance with the VOC limits in §115.473(a) of this title.

(2) The owner or operator of an ~~adhesive or adhesive primer~~ application process claiming an exemption in §115.471 of this title (relating to Exemptions) shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria.

(3) The owner or operator shall maintain records of any testing conducted at an affected facility in accordance with the provisions specified in §115.475(3) and (4) of this title.

(4) Records must be maintained a minimum of two years and made available upon request to authorized representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution agency with jurisdiction.

§115.479. Compliance Schedules.

(a) The owner or operator of an ~~adhesive~~ application process subject to this division shall comply with the requirements in this division no later than March 1, 2013.

(b) The owner or operator of an ~~adhesive~~ application process that becomes subject to this division on or after March 1, 2013, shall comply with the requirements in this division no later than 60 days after becoming subject.

Docket No. 2011-0388-RUL

Alfredo Armendariz, Ph.D.
Regional Administrator
U.S. Environmental Protection Agency - Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Dear Dr. Armendariz:

On December 7, 2011, the Texas Commission on Environmental Quality (Commission) adopted revisions to the State Implementation Plan (SIP).

The Commission adopted amendments to §§115.422, 115.427, 115.429, 115.430, 115.432 - 433, 115.435 - 436, 115.439; new §§115.431, 115.450 - 451, 115.453 - 115.455, 115.458 - 115.461, 115.463 - 115.465, 115.468 - 471, 115.473 - 115.475, 115.478 - 479; and the repeal of §115.437 of 30 TAC Chapter 115, Control of Air Pollution from Volatile Organic Compounds; and corresponding revisions to the SIP.

The adopted rulemaking amends rules that implement Reasonably Available Control Technology in the Dallas-Fort Worth (DFW) and Houston-Galveston-Brazoria (HGB) eight-hour ozone nonattainment areas as defined by the Environmental Protection Agency's most recent Control Technology Guidance (CTG) documents for Industrial Cleaning Solvents; Flexible Package Printing; Paper, Film, and Foil Coatings; Large Appliance Coatings; Metal Furniture Coatings; Miscellaneous Metal and Plastic Parts Coatings; Miscellaneous Industrial Adhesives; and Automobile and Light-Duty Truck Assembly Coatings, as required by the Federal Clean Air Act §182(b)(2). Specifically, the adopted rules will limit the volatile organic compound (VOC) content of coatings and solvents used by affected industrial sites in the DFW and HGB eight-hour ozone nonattainment areas for the following seven CTG emission source categories: Flexible Package Printing; Industrial Cleaning Solvents; Large Appliance Coatings; Metal Furniture Coatings; Paper, Film, and Foil Coatings; Miscellaneous Industrial Adhesives; and Miscellaneous Metal and Plastic Parts Coatings. The adopted rules will also limit the VOC content of coatings and solvents used by affected sites in the DFW area for the Automobile and Light-Duty Truck Assembly Coating CTG emission source category. To further reduce VOC emissions, the adopted rules will also implement work practice standards for coating-related activities and solvent cleaning operations.

Enclosed are the proposed revisions to the SIP, a public hearing certification, a complete record of the public hearings, and the accompanying order. I look forward to your expeditious approval of these SIP revisions.

Sincerely,

Bryan W. Shaw, Ph.D.
Chairman

BWS/AB

Enclosures

cc: The Honorable Rick Perry, Governor of Texas
Mr. Toby Baker, Office of Budget, Planning and Policy, Office of the Governor
Mr. Mark R. Vickery, P.G., Executive Director, Texas Commission on Environmental Quality

bcc: Amy Browning, Staff Attorney, Environmental Law Division
Michael Parrish, Texas Register Coordinator, General Law Division

Joyce Spencer, Air Quality Division
Francis Dowiak, Project Manager, Air Quality Planning Section

Docket No. 2011-0388-RUL

THE STATE OF TEXAS
COUNTY OF TRAVIS

This is to certify that the attached are true and correct copies of documents for revisions to the Texas State Implementation Plan, adopted on December 7, 2011, pursuant to 40 Code of Federal Regulations § 51.104. I am the records administrator for the Air Quality Division of the Texas Commission on Environmental Quality (Commission).

David Brymer
Director, Air Quality Division
Texas Commission on Environmental Quality

ORDER ADOPTING NEW, AMENDED, AND REPEALED RULES AND REVISIONS TO THE STATE IMPLEMENTATION PLAN

Docket No. 2011-0388-RUL

On December 7, 2011, the Texas Commission on Environmental Quality (Commission), during a public meeting, considered adoption of amended §§115.422, 115.427, 115.429, 115.430, 115.432 - 433, 115.435 - 436, 115.439; new §§115.431, 115.450 - 451, 115.453 - 115.455, 115.458 - 115.461, 115.463 - 115.465, 115.468 - 471, 115.473 - 115.475, 115.478 - 479; and the repeal of §115.437. The Commission adopts this amendment in Chapter 115, Control of Air Pollution from Volatile Organic Compounds; and corresponding revisions to the state implementation plan (SIP). The adopted rulemaking amends rules that implement Reasonably Available Control Technology in the Dallas-Fort Worth (DFW) and Houston-Galveston-Brazoria (HGB) eight-hour ozone nonattainment areas as defined by the Environmental Protection Agency's most recent Control Technology Guidance (CTG) documents for Industrial Cleaning Solvents; Flexible Package Printing; Paper, Film, and Foil Coatings; Large Appliance Coatings; Metal Furniture Coatings; Miscellaneous Metal and Plastic Parts Coatings; Miscellaneous Industrial Adhesives; and Automobile and Light-Duty Truck Assembly Coatings, as required by the Federal Clean Air Act §182(b)(2). Specifically, the adopted rules will limit the volatile organic compound (VOC) content of coatings and solvents used by affected industrial sites in the DFW and HGB eight-hour ozone nonattainment areas for the following seven CTG emission source categories: Flexible Package Printing; Industrial Cleaning Solvents; Large Appliance Coatings; Metal Furniture Coatings; Paper, Film, and Foil Coatings; Miscellaneous Industrial Adhesives; and Miscellaneous Metal and Plastic Parts Coatings. The adopted rules will also limit the VOC content of coatings and solvents used by affected sites in the DFW area for the Automobile and Light-Duty Truck Assembly Coating CTG emission source category. To further reduce VOC emissions, the adopted rules will also implement work practice standards for coating-related activities and solvent cleaning operations. Under Tex. Health & Safety Code Ann. §§ 382.011, 382.012, and 382.023 (Vernon 2001), the Commission has the authority to control the quality of the state's air and to issue orders consistent with the policies and purposes of the Texas Clean Air Act, Chapter 382 of the Tex. Health & Safety Code. The proposed rule rules were published for comment in the June 24, 2011 issue of the *Texas Register* (36 TexReg 3834).

Pursuant to Tex. Health & Safety Code Ann. § 382.017 (Vernon 2001), Tex. Gov't Code Chapter 2001 (Vernon 2008), and 40 Code of Federal Regulations § 51.102, and after proper notice, the Commission conducted public hearing to consider the new, amended, and repealed rule and revisions to the SIP. Proper notice included prominent advertisement in the areas affected at least 30 days prior to the dates of the hearings. Public hearings were held in Arlington, Texas on July 14, 2011, in Houston, Texas on July 18, 2011, and in Austin, Texas on July 22, 2011.

The Commission circulated hearing notices of its intended action to the public, including interested persons, the Regional Administrator of the EPA, and all applicable local air pollution control agencies. The public was invited to submit data, views, and recommendations on the proposed new, amended, and repealed rules and SIP revisions, either orally or in writing, at the hearings or during the comment period. Prior to the scheduled hearings, copies of the proposed new, amended, and repealed rules and SIP revisions were available for public inspection at the Commission's central office and on the Commission's Web site.

Data, views, and recommendations of interested persons regarding the proposed new, amended, and repealed rules and SIP revisions were submitted to the Commission during the comment period, and were considered by the Commission as reflected in the analysis of testimony incorporated by reference to this Order. The Commission finds that the analysis of testimony includes the names of all interested groups or associations offering comment on the proposed new, amended, and repealed rules and SIP revisions and their position concerning the same.

IT IS THEREFORE ORDERED BY THE COMMISSION that the new, amended, and repealed rules and revisions to the SIP incorporated by reference to this Order are hereby adopted. The Commission further authorizes staff to make any non-substantive revisions to the rules necessary to comply with *Texas Register* requirements. The adopted rules and the preamble to the adopted rules and the revisions to the SIP are incorporated by reference in this Order as if set forth at length verbatim in this Order.

IT IS FURTHER ORDERED BY THE COMMISSION that on behalf of the Commission, the Chairman should transmit a copy of this Order, together with the adopted rules and revisions to the SIP, to the Regional Administrator of EPA as a proposed revision to the Texas SIP pursuant to the Federal Clean Air Act, codified at 42 U.S. Code Ann. §§ 7401 - 7671q, as amended.

This Order constitutes the Order of the Commission required by the Administrative Procedure Act, Tex. Gov't Code, § 2001.033 (Vernon 2008).

If any portion of this Order is for any reason held to be invalid by a court of competent jurisdiction, the invalidity of any portion shall not affect the validity of the remaining portions.

Date issued:

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

_____

Bryan W. Shaw, Ph.D., Chairman

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

§115.115. Approved Test Methods.

§115.116. Monitoring and Recordkeeping Requirements.

§115.117. Exemptions.

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

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

TRD-201102111
Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
Earliest possible date of adoption: July 24, 2011
For further information, please call: (512) 239-0779

♦ ♦ ♦

SUBCHAPTER E. SOLVENT-USING PROCESSES

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

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

Background and Summary of the Factual Basis for the Proposed Rules

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

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

The CTG documents provide information to assist states and local air pollution control authorities in determining RACT for specific emission sources. The CTG documents describe the EPA's evaluation of available information, including emission control options and associated costs, and provide the EPA's RACT recommendations for controlling emissions from these sources. The CTG documents do not impose any legally binding regulations or change any applicable regulations. The EPA's guidance on RACT indicates that states can choose to implement the CTG recommendations, implement an alternative approach, or demonstrate that additional control for the CTG emission source category is not technologically or not economically feasible in the area.

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

Flexible Package Printing CTG, Group II Issued in 2006

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

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

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

coating content limits. Implementing the 2006 CTG recommendation may exempt flexible package printing lines co-located on a property with other flexographic and rotogravure printing lines that are currently required to comply with the VOC control limits. The proposed Chapter 115 rules would retain the existing VOC content limits for a flexible package printing line with VOC emissions below the 2006 CTG-recommended exemption threshold.

The EPA's 2006 CTG recommends requiring control equipment first installed before the effective date of rules implementing the CTG recommendations to have an overall control efficiency ranging from 65% to 75% and control equipment first installed after the effective date of the rules implementing the CTG recommendations to have an overall control efficiency of 80%. The commission disagrees with the 2006 CTG recommendation to correlate control device efficiency requirements with the first installation date of the control device regardless of where the equipment was first installed. Imposing this policy may encourage the installation of older, less efficient equipment and may create potential backsliding issues. The policy may also create significant practical enforceability issues for commission investigators with regard to verifying the first installation date of the control equipment. Instead, the commission proposes to implement the CTG-recommended 80% overall control efficiency, regardless of the first installation date.

The proposed rulemaking would implement the recommendations in the EPA's 2006 Flexible Package Printing CTG that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble. The commission requests comment on the technological and economic feasibility of the proposed rules.

Industrial Cleaning Solvents CTG, Group II Issued in 2006

The proposed rules would establish VOC content limits for cleaning solvents used in general cleaning activities, provide exemptions for certain cleaning operations from all or portions of the rule, and require certain work practice procedures for the use, storage, and disposal of cleaning solvents. The proposed rules would affect industrial cleaning solvent operations in the DFW and HGB areas beginning March 1, 2013, located on a property with total actual VOC emissions of at least 3.0 tpy, when uncontrolled, from all cleaning solvents.

The proposed rulemaking would implement the recommendations in the EPA's 2006 Industrial Cleaning Solvents CTG that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble. The commission requests comment on the technological and economic feasibility of the proposed rules.

Large Appliance Coatings CTG, Group III Issued in 2007

The proposed Chapter 115 rulemaking would reduce VOC content limits of coatings, increase the overall control efficiency for add-on controls used in large appliance coating operations, and establish minimum transfer efficiency for coating application methods. The proposed rules would also require certain work practice procedures for coating-related activities and materials used during associated cleaning operations.

The EPA's 2007 CTG recommends exempting large appliance coating processes from the coating VOC content limits and work practice standards if total uncontrolled VOC emissions from coatings and associated cleaning solvents are less than 15 pounds per day. The current Chapter 115 rules provide an exemption from the coating VOC content limits for large appliance coating operations if total uncontrolled VOC emissions from all applicable coating processes on a property subject to Chapter 115, Subchapter E, Division 2, Surface Coating Processes are less than 3.0 pounds per hour and 15 pounds per day. The existing exemption from the required VOC controls may be more stringent for properties conducting multiple coating processes specified in Division 2 because the exemption is not based on VOC emissions from a single coating category. To prevent potential backsliding for properties already required to comply with the state's regulations, the proposed Chapter 115 rules would retain the existing exemption approach.

The existing Chapter 115 large appliance coating limits are based on the original CTG recommendations issued by the EPA in 1977. Several of the recommended VOC content limits for specific coating categories listed in the 2007 CTG document are less stringent than the limits specified in the EPA's original CTG recommendations for this coating category. The 2007 CTG also recommends minimum solids transfer efficiency for coating application equipment. Despite the higher VOC content limits for the specialty coatings, the EPA's 2007 CTG claims that implementing the limits as recommended would result in an overall emissions reduction and provides documentation containing the methodology used to estimate the reduction. The commission has conducted a comprehensive comparison of the 2007 CTG recommendations to the existing VOC coating content limit and determined that proposing the 2007 CTG-recommended coating VOC content limits will not negatively impact the status of the state's attainment with the 1997 eight-hour ozone NAAQS, will not interfere with control measures, and will not prevent reasonable further progress toward attainment of the ozone NAAQS.

The EPA's 2007 CTG document recommends exempting the following types of large appliance coatings and coating operations from the coating VOC limit requirements: stencil coatings; safety-indicating coatings; solid-film lubricants; electric-insulating and thermal-conducting coatings; and touch-up and repair coatings. The commission is not proposing to provide exemption from the coating VOC limits for these coatings and coating operations because they are not provided specific exemption from the coating VOC emission limits in the commission's existing rules. The commission requests comment on whether these large appliance coatings and coating operations should be exempt from the large appliance VOC limit requirements.

Additionally, the commission proposes to retain the applicability of affected sources in the existing Chapter 115 rules for large appliance coating operations. In the 2007 CTG, the EPA recommends restricting the rule applicability to large appliance manufacturers; however, the existing Chapter 115 rules extend beyond the manufacturer to include any operation that coats large appliances.

The proposed rulemaking would implement the recommendations in the EPA's 2007 Large Appliance Coatings CTG that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble. The commission requests comment on the technological and economic feasibility of the proposed rules.

Metal Furniture Coatings CTG, Group III Issued in 2007

The proposed Chapter 115 rulemaking would reduce VOC content limits of coatings, increase the overall control efficiency for add-on controls used in metal furniture coating processes, and establish minimum transfer efficiency of coating application

methods. The proposed rules would also require certain work practice procedures for coating-related activities and materials used during associated cleaning operations.

The EPA's 2007 CTG recommends exempting metal furniture coating operations from the coating VOC content limits and work practice standards if total uncontrolled VOC emissions from coatings and associated cleaning solvents are less than 15 pounds per day. The current Chapter 115 rules provide an exemption from the coating VOC content limits for metal furniture coating operations if total uncontrolled VOC emissions from coatings in all applicable coating processes located on a property subject to Chapter 115, Subchapter E, Division 2, are less than 3.0 pounds per hour and 15 pounds per day. In the commission's existing rules, exemption from the required VOC controls may be more stringent for properties conducting multiple coating processes specified in Division 2 because the exemption is not based on VOC emissions from a single coating category. To prevent potential backsliding for properties already required to comply with the state's regulations, the proposed Chapter 115 rules would retain the exemption approach in the commission's existing rules.

The existing Chapter 115 metal furniture coating limits are based on the original CTG recommendations issued by the EPA in 1977. Several of the recommended VOC content limits for specific coating categories listed in the 2007 CTG document are less stringent than the limits specified in the EPA's original CTG recommendations for this coating category. The 2007 CTG also recommends minimum solids transfer efficiency for coating application equipment. Despite the higher VOC content limits for the specialty coatings, the EPA's 2007 CTG claims that implementing the limits as recommended would result in an overall emissions reduction and provides documentation containing the methodology used to estimate the reduction. The commission has conducted a comprehensive comparison of the 2007 CTG recommendations to the VOC coating content limits in the commission's existing rules and determined that proposing the 2007 CTG-recommended coating VOC content limits will not negatively impact the status of the state's attainment with the 1997 eight-hour ozone NAAQS, will not interfere with control measures, and will not prevent reasonable further progress toward attainment of the ozone NAAQS.

The EPA's 2007 CTG document recommends exempting the following types of metal furniture coatings and coating operations from the coating VOC limit requirements: stencil coatings; safety-indicating coatings; solid-film lubricants; electric-insulating and thermal-conducting coatings; and touch-up and repair coatings. The commission is not proposing to provide exemption from the coating VOC limits for these coatings and coating operations because they are not provided specific exemption from the coating VOC emission limits in the commission's existing rules. The commission requests comment on whether these metal furniture coatings and coatings operations should be exempt from the metal furniture VOC limit requirements.

Additionally, the commission proposes to retain the applicability of affected sources in the existing Chapter 115 rules for metal furniture coating operations. In the 2007 CTG, the EPA recommends restricting the rule applicability to metal furniture manufacturers; however, the existing Chapter 115 rules extend beyond the manufacturer to include any operation that coats metal furniture.

The proposed rulemaking would implement the recommendations in the EPA's 2007 Metal Furniture Coatings CTG that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble. The commission requests comment on the technological and economic feasibility of the proposed rules.

Paper, Film, and Foil Coatings CTG, Group III Issued in 2007

The proposed rulemaking would incorporate new requirements in Chapter 115, Subchapter E, Division 5, affecting individual paper, film, and foil coating lines with the potential to emit from coatings, equal to or greater than 25 tpy of VOC, when uncontrolled. The proposed Chapter 115 rulemaking would reduce the VOC content limits of coatings, increase the overall control efficiency for add-on controls used in paper, film, and foil coating processes, and establish work practice procedures for materials used during cleaning operations associated with paper, film, and foil coating.

The proposed rulemaking would also revise Chapter 115, Subchapter E, Division 2 to incorporate new work practice procedures for materials used during cleaning operations associated with paper, film, and foil coating processes that are specifically exempt from the proposed new Subchapter E, Division 5 rules in the DFW and HGB areas.

The EPA's 2007 CTG recommends exempting all paper, film, and foil coating operations on a property from the coating VOC content limits and work practice standards if total uncontrolled VOC emissions from paper, film, and foil coatings and associated cleaning solvents are less than 15 pounds per day. The current Chapter 115 rules provide an exemption from the coating VOC content limits for paper, film, and foil coating operations if total uncontrolled VOC emissions from all applicable surface coating processes on a property subject to Chapter 115, Subchapter E, Division 2, are less than 3.0 pounds per hour and 15 pounds per day. The exemption from the required VOC controls in the commission's existing rules may be more stringent for properties conducting multiple coating processes specified in Division 2 because the exemption is not based on VOC emissions from a single coating category. To prevent potential backsliding for properties conducting paper, film, and foil coating operations already required to comply with the state's regulations, the proposed Chapter 115 rules would retain the exemption approach in the commission's existing rules.

Additionally, the commission is not proposing to implement the EPA's 2007 CTG recommendation to exempt a paper, film, and foil coating line from complying with VOC coating content limits if the line has the potential to emit less than 25 tpy of uncontrolled VOC emissions from coatings. As previously stated, the current Chapter 115 rules require combining the VOC emissions from all applicable surface coating processes located on a property subject to Subchapter E, Division 2 to determine exemption from the VOC coating content limits. Implementing the 2007 CTG recommendation may exempt paper, film, and foil coating lines co-located on a property with other coating lines subject to Division 2 that are currently complying with the VOC coating content limits. To prevent backsliding, the proposed Chapter 115 rules would retain the VOC content limits in the commission's existing rules for a paper, film, and foil coating line with VOC emissions below the 2007 CTG-recommended exemption threshold.

The proposed rulemaking would implement the recommendations in the EPA's 2007 Paper, Film, and Foil Coatings CTG that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble. The

commission requests comment on the technological and economic feasibility of the proposed rules.

Miscellaneous Industrial Adhesives CTG, Group IV Issued in 2008

The proposed rules would establish VOC content limits used during specific adhesive application processes; provide various exemptions from all or portions of the rules for certain adhesives and adhesive application processes; and require certain work practice procedures for the use, storage, and disposal of adhesives, adhesive-related waste, solvent, and cleaning materials. The proposed rules would affect adhesive application processes in the DFW and HGB areas beginning March 1, 2013, located on a property with total actual VOC emissions of at least 3.0 tpy when uncontrolled from adhesives and solvents.

The proposed rulemaking would implement the recommendations in the EPA's 2008 Miscellaneous Industrial Adhesives CTG that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble. The commission requests comment on the technological and economic feasibility of the proposed rules.

Miscellaneous Metal and Plastic Parts Coatings CTG, Group IV Issued in 2008

The proposed Chapter 115 rulemaking would expand the scope of the existing rule applicability to include the new coating categories recommended in the EPA's 2008 CTG and implement the recommendations for those coating categories. The proposed Chapter 115 rulemaking would reduce VOC content limits of coatings and increase the overall control efficiency of add-on controls used in miscellaneous metal and plastic part coating operations, establish minimum transfer efficiency of coating application methods, and incorporate a new test method. The proposed rules would also require certain work practice procedures for coating-related activities and cleaning operations associated with miscellaneous metal and plastic parts coating.

The EPA's 2008 CTG recommends exempting miscellaneous metal and plastic parts coating operations from the VOC control requirements if total uncontrolled VOC emissions from coatings and cleaning solvents are less than 15 pounds per day. The current Chapter 115 rules exempt miscellaneous metal parts and products coating operations from the required VOC coating limits if located on a property where total uncontrolled VOC emissions from all applicable surface coating processes subject to Chapter 115, Subchapter E, Division 2 are less than 3.0 pounds per hour and 15 pounds per day. In the commission's existing rules, exemption from the required controls may be more stringent for properties conducting multiple coating processes specified in Division 2 because the exemption is not based on VOC emissions from a single coating category. To prevent potential backsliding for sources already subject to the Chapter 115 rules, the proposed rulemaking would integrate the new 2008 CTG coating categories into the exemption in the commission's existing rules from the VOC control requirements. The proposed Chapter 115 rules would retain the state's approach to maintain consistency with the current exemption criteria.

The existing Chapter 115 miscellaneous metal part and product coating limits are based on the original CTG recommendations issued by the EPA in 1978. Several of the recommended VOC content limits for specific coating categories listed in the EPA's 2008 CTG document are less stringent than the limits specified in the EPA's original CTG recommendations for this coating category. The EPA's 2008 CTG also recommends minimum solids transfer efficiency for coating application equipment. Although the EPA's 2008 CTG does not quantify the estimated VOC emissions reduced as a result of implementing the recommended VOC content limits, the commission applied an approach consistent with the Large Appliance Coating and Metal Furniture Coating CTG emission reduction memo documents to estimate the VOC emissions reduction. The commission has determined that proposing the EPA's 2008 CTG-recommended coating VOC content limits will not negatively impact the status of the state's attainment with the 1997 eight-hour ozone NAAQS, will not interfere with control measures, and will not prevent reasonable further progress toward attainment of the 1997 eight-hour ozone NAAQS.

The EPA's 2008 CTG document recommends exempting the following types of miscellaneous metal part and product coatings and coating operations from the coating VOC limits and the coating application system requirements: stencil coatings; safety-indicating coatings; solid-film lubricants; electric-insulating and thermal-conducting coatings; magnetic data storage disk coatings; and plastic extruded onto metal parts to form a coating. The commission is not proposing to provide exemption from the coating VOC limits for these coatings and coating operations because they are not provided specific exemption from the coating VOC emission limits in the commission's existing rules; however, the proposed Chapter 115 rules do provide exemptions from the new coating application system requirements. The commission requests comment on whether these metal part coatings and coating should be exempt from the miscellaneous metal part and product coating VOC limit requirements.

Additionally, the EPA's 2008 CTG document recommends structuring RACT rule requirements to provide properties that coat heavy-duty truck bodies or body parts with the option of meeting either the miscellaneous metal and plastic parts coatings regulations or automobile and light-duty truck assembly coatings regulations. The EPA's CTG recommendation is inconsistent with the general regulatory approach in Chapter 115 and is not being proposed. The commission requests comment on whether operations coating heavy-duty trucks should be provided the option to comply with either the miscellaneous metal and plastic parts coatings regulations or automobile and light-duty truck assembly coatings regulations.

The proposed rulemaking would implement the recommendations in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG that the commission has determined are RACT in the DFW and HGB areas, except as specifically discussed in this preamble. The commission requests comment on the technological and economic feasibility of the proposed rules.

Automobile and Light-Duty Truck Assembly Coatings CTG, Group IV Issued in 2008

The proposed Chapter 115 rulemaking would reduce the VOC content limits of coatings applied to automobile and light-duty trucks during manufacturing and establish certain work practice procedures for cleaning operations associated with automobile and light-duty truck assembly coatings.

The EPA's 2008 CTG acknowledges that the coating of other parts on coating lines separate from automobile and light-duty truck assembly, such as bumpers, aftermarket parts, and repair parts, are classified under the miscellaneous metal parts and products coating category. The EPA's 2008 CTG recommends allowing the separate coating of the previously described parts to be classified under the automobile and light-duty truck assembly

coatings regulations since it is common in the industry for automobile and light-duty truck manufacturers to coat these parts at their sites. The commission requests comment on the appropriate applicability for these coating operations.

The proposed rulemaking would implement the recommendations in the EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG that the commission has determined are RACT in the DFW area, except as specifically discussed in this preamble. The commission requests comment on the technological and economic feasibility of the proposed rules.

Demonstrating Noninterference Under FCAA, Section 110(l)

The commission provides the following information to demonstrate that the inclusion of the Large Appliance Coatings, Metal Furniture Coatings, and Miscellaneous Metal and Plastic Parts Coatings CTG recommendations will not negatively impact the status of the state's attainment with the 1997 eight-hour ozone NAAQS, will not interfere with control measures or any other applicable requirement, and will not prevent reasonable further progress toward attainment of the ozone NAAQS.

By letter dated December 8, 2008, the commission requested clarification from the EPA regarding several issues related to the recommendations in the following three CTG categories: Large Appliance Coatings; Metal Furniture Coatings; and Miscellaneous Metal and Plastic Parts Coatings. A number of the recommended VOC content limits for specific coatings categories in the CTG documents are less stringent than the more general VOC content limits specified in the EPA's original CTG recommendations. The commission requested clarification to assure that implementing the CTG recommendations would not be considered as backsliding and to be certain that the commission has the appropriate information to determine whether the CTG recommendations actually represent RACT for Texas. On March 17, 2011, the EPA issued a guidance memorandum regarding these three CTG categories entitled, *Approving SIP Revisions Addressing VOC RACT Requirements for Certain Coatings Categories.* The EPA stated in the memorandum: ". . . if a state believes the volume usage distribution among the general and specialty categories in the docket is representative of the distribution in the nonattainment area, we believe that if a state undertakes wholesale adoption of the new categorical limits in a specific CTG, the state may rely on the assessments in the docket to demonstrate that the range of new limits will result in an overall reduction in emissions from the collection of covered coatings."

As discussed elsewhere in this preamble, estimated percent reductions for these CTG categories supports the EPA's position that applying the new recommended limits as a whole result in net reductions. In addition, as discussed elsewhere in this preamble, the current Chapter 115 rules for these CTG categories have exemption thresholds more stringent than recommended by the CTG documents and the proposed rulemaking would retain the more stringent exemption thresholds of the current rules to prevent potential backsliding. This approach also results in an overall control level greater than the new CTG recommendations and supports the commission's position that the proposed rulemaking provides equivalent or better VOC control for these CTG categories and is not backsliding under the FCAA. The commission contends that the proposed rulemaking is consistent with the EPA's guidance in the March 17, 2011, memorandum and meets RACT requirements for these three CTG categories.

In *Control Techniques Guidelines for Large Appliance Coatings* (EPA 453/R-07-004), the Large Appliance Coatings CTG issued in 2007, the EPA claims the CTG recommendations will reduce VOC emissions from large appliance coatings by about 30%. Although the basis for the emission reduction estimate is not specifically discussed in the published CTG document, the EPA docket for the CTG provides some information demonstrating an overall 30% reduction in VOC emissions from implementing the updated CTG recommendations. The document can be found online at *www.regulations.gov,* using document identifier EPA-HQ-OAR-2007-0329-0009.

In the 2007 Large Appliance Coatings CTG, the EPA recommends VOC content limits for 16 coating categories. There are 12 specialty coating categories and four general coating categories. The CTG-recommended VOC content limits are expressed in pounds of VOC per gallon (lb VOC/gal) of coating, minus water and exempt solvents. The CTG also recommends requiring the use of application equipment with a minimum coating solids transfer efficiency of 65%. The existing VOC content limits for large appliance coatings in §115.421(a)(1) were implemented to satisfy RACT requirements under the FCAA based on recommendations in the EPA's 1977 Large Appliance Coatings CTG, *Control of Volatile Organic Emissions from Existing Stationary Sources - Volume V: Surface Coating of Large Appliances* (EPA-450/2-77-034). The existing Chapter 115 regulations limit the VOC content of large appliance coatings to 2.8 lb VOC/gal of coating, minus water and exempt solvents, as delivered to the application system. There is no required minimum coating solids transfer efficiency.

Since the transfer efficiency determines the amount of coating used to produce a particular product, the Chapter 115 limits and CTG recommendations must be converted to a common unit that describes the emissions from the regulated activity, such as lb VOC/gal solids deposited.

In the calculation of emission reductions from the 2007 Large Appliance Coatings CTG, *Percentage Emission Reductions Estimate for Large Appliances,* which can be found online at *www.regulations.gov,* using document identifier EPA-HQ-OAR-2007-0329-0009, the EPA assumes that the VOC solvents used in coatings have a density of 7.36 lb VOC/gal VOC. Using this assumption, the EPA calculated the volume volatile content of a Chapter 115-compliant coating as (2.8 lb VOC/gal coating) / (7.36 lb VOC/gal VOC) = 0.38 or 38% VOC by volume. If, as assumed by the EPA, all non-VOC material are solids, the solids content is 62% by volume.

In the 2007 Large Appliance Coatings CTG, the EPA claimed that the 1977 Large Appliance Coatings CTG assumed a 60% coating solids transfer efficiency. If the commission uses this assumption, the current Chapter 115 large appliance coating VOC content limit is equivalent to 7.5 lb VOC/gal of solids deposited = (2.8 lb VOC/gal coating applied) / {(0.62 gallon solids applied/per gallon coating applied) x (0.60 gallon solids deposited/per gallon solids applied)}.

Using the EPA assumptions for solvent density, solid non-VOC material, and the minimum transfer efficiency of 65%, the 2007 Large Appliance Coatings CTG recommendations are between 5.2 and 10.3 lb VOC/gal of solids deposited, with 11 coating categories over 7.5 lb VOC/gal of solids deposited and five categories under 7.5 lb VOC/gal of solids deposited.

In the 2007 Large Appliance Coatings CTG emission reduction document, the EPA asserted that general, one-component and

general, multi-component baked coatings with the lowest VOC content limit equivalent to 5.2 (lb VOC/gal solids deposited) comprise most of the coatings used on large appliances. The EPA calculated emission reductions from these general coatings as 31% = (7.5 - 5.2)/(7.5). If the commission assumes the lowest VOC coatings categories comprise 96.7% of all use and the remainder is evenly divided between the other categories, the overall emission reduction equals the 30% claimed by the EPA.

Using identical assumptions as the EPA, the commission contends that the 2007 Large Appliance Coatings CTG recommendations are more stringent than the current large appliance VOC content limit in Chapter 115. The commission requests comments on the comparative stringency of the 2007 Large Appliance Coatings CTG recommendations and the current Chapter 115 rule.

The existing VOC content limits for metal furniture coatings in §115.421(a)(2) were implemented to satisfy RACT requirements under the FCAA based on the EPA's 1977 Metal Furniture Coatings CTG, *Control of Volatile Organic Emissions from Existing Stationary Sources - Volume III: Surface Coating of Metal Furniture* (EPA-450/2-77-032). The current Chapter 115 metal furniture coating content limit is 3.0 lb VOC/gal of coating, minus water and exempt solvents, as delivered to the application system. There is no required minimum coating solids transfer efficiency.

The 2007 Metal Furniture Coatings CTG, *Control Techniques Guidelines for Metal Furniture Coatings* (EPA 453/R-07-005), recommends VOC content limits for the same 16 coating categories as the 2007 Large Appliance Coatings CTG. There are 12 specialty coating categories and four general coating categories. These CTG-recommended VOC content limits are expressed as lb VOC/gal of coating, minus water and exempt solvents. The CTG also recommends requiring the use of application equipment with a minimum coating solids transfer efficiency of 65%. The EPA applied the same assumptions that produced emission estimates for the 2007 Large Appliance Coatings CTG to estimate VOC reductions for the 2007 Metal Furniture Coatings CTG, which can be found online at *www.regulations.gov*, using document identifier EPA-HQ-OAR-2007-0334-0010.

In the 2007 Metal Furniture Coatings CTG, the EPA claimed that the 1977 Metal Furniture Coatings CTG assumed a 60% transfer efficiency. If the commission assumes this coating solids transfer efficiency and all non-VOC material are solids, the current Chapter 115 metal furniture coating content limit is equivalent to 8.4 lb VOC/gal of solids deposited. Using the EPA assumptions for solvent density, solid non-VOC material, and the minimum transfer efficiency of 65%, the 16 category limits of the 2007 Metal Furniture Coatings CTG vary from 5.2 to 10.3 lb VOC/gal solids deposited, with eight specialty categories over 8.4 lb VOC/gal solids deposited and the four general categories and four specialty categories under 8.4 lb VOC/gal solids deposited.

In the 2007 Metal Furniture Coatings CTG emission reduction memo, the EPA asserted that general, one-component air-dried and baked and general, multi-component baked coatings with the lowest VOC content limit equivalent to 5.2 lb VOC/gal solids deposited account for most of the coatings used on metal furniture. The EPA calculated emission reductions from these general coatings as 38% = (8.4 - 5.2)/(8.4). If the commission assumes the lowest VOC category coatings comprise 91.1% of total use and the remainder is evenly divided between all other categories, the overall emission reduction equals the 35% claimed by the EPA.

Using identical assumptions as the EPA, the commission contends that the 2007 Metal Furniture Coatings CTG recommendations are more stringent than the current metal furniture VOC content limit in Chapter 115. The commission requests comments on the comparative stringency of the 2007 Metal Furniture Coatings CTG recommendations and the current Chapter 115 rule.

The existing VOC content limits for miscellaneous metal parts coatings in §115.421(a)(9) were implemented to satisfy RACT requirements under the FCAA based on the EPA's 1978 Miscellaneous Metal Parts and Products CTG, *Control of Volatile Organic Emissions from Existing Stationary Sources - Volume VI: Surface Coating of Miscellaneous Metal Parts and Products* (EPA-450/2-78-015). The current Chapter 115 miscellaneous metal parts and products coating content limits for the four specified categories are 3.0, 3.5, and 4.3 lb VOC/gal of coating, minus water and exempt solvents, as delivered to the application system. There is no required minimum coating solids transfer efficiency. Using the EPA assumptions for solvent density, solid non-VOC material, and a transfer efficiency of 60%, these limits are equivalent to 8.4, 11.1, and 17.2 lb VOC/gal solids deposited, respectively.

The 2008 Miscellaneous Metal and Plastic Parts Coating CTG, *Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings* (EPA 453/R-08-003), recommends VOC content limits divided into 50 categories. These CTG-recommended VOC content limits are between 2.3 and 6.2 lb VOC/gal of coating, minus water and exempt solvents. The CTG also recommends requiring the use of application equipment with a minimum coating solids transfer efficiency of 65%. Using this transfer efficiency and the EPA assumptions for solvent density and solid non-VOC materials, these limits are between 5.2 and 60.5 lb VOC/gal solids deposited. Twenty-one of the CTG categories are more stringent than their Chapter 115 counterparts, while 29 are less stringent.

In the 2007 Metal Furniture and Large Appliance Coatings CTG documents, the EPA asserted that the general category coatings with the lowest VOC content limit equivalent to 5.2 (lb VOC/gal solids deposited), general, one-component baked and general, multi-component baked coatings, account for most of the coatings used on affected products. If the commission assumes these coatings comprise 94.2% of total use on miscellaneous metal parts and the remainder is evenly divided between the other categories, the overall emission reduction for miscellaneous metal parts coatings equals the 35% claimed by the EPA for the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG, which includes reductions from coating plastic products.

Using identical assumptions as the EPA, the commission contends that the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG recommendations are more stringent than the current VOC content limits for miscellaneous metal parts in Chapter 115. The commission requests comments on the comparative stringency of the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG recommendations and the current Chapter 115 rule.

Based on this analysis, the commission has determined the proposed inclusion of the Large Appliance Coatings, Metal Furniture Coatings, and Miscellaneous Metal and Plastic Parts Coatings CTG recommendations will not interfere with the state's attainment of demonstration with the 1997 eight-hour ozone NAAQS, reasonable further progress towards attainment, or any other applicable requirement of the FCAA.

Section by Section Discussion

The commission proposes to create new Division 5 in Chapter 115, Subchapter E, entitled *Control Requirements for Surface Coating Processes,* to accommodate new coating categories and rule requirements being proposed in response to the Large Appliance Coatings; Metal Furniture Coatings; Automobile and Light-Duty Truck Assembly Coatings; Paper, Film, and Foil Coatings; and Miscellaneous Metal and Plastic Parts Coatings CTG documents. Proposed new Division 5 would apply in the DFW and HGB areas and would contain the Chapter 115 rules applicable to the surface coating categories that are currently located in Division 2 except where the commission has determined the controls in the commission's existing rules are not RACT for these areas. Proposed new Division 5 improves readability of the Chapter 115 rules by separating the requirements for the surface coating processes in the DFW and HGB areas affected by the proposed rulemaking from the requirements applicable to locations not affected by the proposed rulemaking.

The commission proposes to create new Division 6 in Chapter 115, Subchapter E, entitled *Industrial Cleaning Solvents,* to implement the EPA's 2007 Industrial Cleaning Solvents CTG recommendations for this new emission source category in the DFW and HGB areas.

The commission proposes to create new Division 7 in Chapter 115, Subchapter E, entitled *Miscellaneous Industrial Adhesives,* to implement the CTG recommendations for this new emission source category in the DFW and HGB areas.

In addition to proposed amendments to implement RACT for the specified surface coating processes, flexible package printing processes, industrial cleaning solvents, and miscellaneous industrial adhesives, the commission proposes grammatical, stylistic, and various other non-substantive changes to update the rule in accordance with current *Texas Register* style and format requirements, improve readability, establish consistency in the rules, and conform to the standards in the *Texas Legislative Council Drafting Manual,* February 2011. Such changes include appropriate and consistent use of acronyms, punctuation, section references, and certain terminology like *that, which, shall,* and *must.* References to the *Dallas/Fort Worth area* and the *Houston/Galveston area* have been updated to the *Dallas-Fort Worth area* and the *Houston-Galveston-Brazoria area,* respectively to be consistent with current terminology for the region. These non-substantive changes are not intended to alter the existing rule requirements in any way and are not specifically discussed in this preamble. The commission is requesting comment on any instance where these proposed technical corrections would inadvertently change the requirements in the commission's existing rules.

SUBCHAPTER E, SOLVENT-USING PROCESSES

DIVISION 2, SURFACE COATING PROCESSES

Section 115.422, Control Requirements

The commission proposes minor non-substantive changes to the introductory paragraph of existing §115.422 and to §115.422(6) to update rule language to comply with current rule formatting standards. These changes are not intended to alter the meaning of §115.422.

The commission proposes §115.422(7) to indicate that beginning March 1, 2013, the owner or operator of a paper surface coating line subject to this division and located in the DFW or HGB areas would be required to implement the work practices specified in subparagraphs (A) - (E) to limit VOC emissions from storage, mixing, and handling of cleaning and cleaning-related waste materials. The work practices in proposed subparagraphs (A) - (E) include: storing all VOC-containing cleaning materials in closed containers; ensuring that mixing and storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials; minimizing spills of VOC-containing cleaning materials; conveying VOC-containing cleaning materials from one location to another in closed containers or pipes; and minimizing VOC emissions from cleaning of storage, mixing, and conveying equipment.

Section 115.427, Exemptions

The commission proposes amending §115.427(a)(3) to clarify that the emission calculations used in surface coating activities that are not addressed by the surface coating categories of proposed new §115.453 are excluded. The proposed amendment is necessary to ensure the coatings and solvents used in the surface coating processes transitioning from applicability in this division to proposed new Division 5 continue to be included in the emissions calculations that determine exemption for the surface coating categories that are not transitioning to applicability in Division 5.

The commission proposes §115.427(a)(7) to indicate that beginning March 1, 2013, in the DFW and HGB areas the surface coating categories listed in subparagraphs (A) - (D) would be exempt from the requirements in Division 2 if they are subject to the requirements in proposed new Division 5. Proposed subparagraphs (A) - (C) list large appliance coating, metal furniture coating, and miscellaneous metal parts and products coating, respectively. Proposed subparagraph (D) lists each paper coating line with the potential to emit equal to or greater than 25 tpy of VOC emissions from all coatings applied. For reasons discussed elsewhere in this preamble, the commission is not proposing to implement the EPA's CTG recommendation to completely exempt individual paper coating lines from all VOC emission limits if the emissions generated are less than 25 tpy. Paper coating lines may already be required to comply with the existing requirements in this division and exempting them from the VOC emission limits may result in backsliding. The paper coating lines that remain subject to this division on or after the March 1, 2013, compliance date would not be subject to any portion of the Division 5 rules affecting paper, film, and foil coating processes. Proposed subparagraph (E) lists automobile and light-duty truck manufacturing coating. Proposed §115.427(a)(7) is necessary to clarify that beginning March 1, 2013, the surface coating categories proposed for regulation in new Division 5 are no longer required to comply with any portion of the requirements in Division 2 and minimize potential dual applicability between Divisions 2 and 5. The commission acknowledges that it is possible that some facilities may still be subject to both divisions if the facilities perform coatings operations for multiple categories subject to Division 2.

Section 115.429, Counties and Compliance Schedules

The commission proposes subsection (d) to indicate the owner or operator of a paper surface coating process shall comply with the requirements in §115.422(7) no later than March 1, 2013. The March 1, 2013, compliance date provides affected owners and operators approximately a year and a half to make any necessary changes and ensures that any VOC emission reductions achieved by the proposed rule will occur prior to the ozone season in the DFW area.

SUBCHAPTER E, SOLVENT-USING PROCESSES

DIVISION 3, FLEXOGRAPHIC AND ROTOGRAVURE PRINTING

Section 115.430, Applicability and Definitions

The commission proposes changing the title of §115.430 from *Flexographic and Rotogravure Printing Definitions* to *Applicability and Definitions* to reflect the proposed changes to the content of this section to include the rule applicability.

The commission proposes subsection (a) to indicate that the requirements in this division apply to the specified flexographic and rotogravure printing processes in paragraphs (1) - (4) that are located in the Beaumont-Port Arthur (BPA), DFW, El Paso, and HGB areas and in Gregg, Nueces, and Victoria Counties, unless exempted in proposed new §115.431. The BPA and El Paso areas and Gregg, Nueces, and Victoria Counties are included in proposed subsection (a) because these locations are affected by the existing flexographic and rotogravure printing rules; however, no new requirements are being proposed for printing processes in these locations. Proposed subsection (a) establishes consistency with other Chapter 115 rules and improves the readability of the rule by first describing the units affected by the subsequent requirements.

Proposed paragraph (1) specifies that packaging rotogravure printing lines are included in the rule applicability. Proposed paragraph (2) specifies that publication rotogravure printing lines are included in the rule applicability. Proposed paragraph (3) specifies that flexographic printing lines are included in the rule applicability. Proposed paragraph (4) specifies that flexible package printing lines are included in the rule applicability. The proposed new applicability format is not intended to alter the existing applicability for this division. The commission requests comment on whether the existing applicability of flexographic and rotogravure printing is inadvertently impacted by specifying the applicable units in the proposed format.

To accommodate proposed subsection (a), the commission proposes the flexographic and rotogravure printing definitions currently located in §115.430(1) - (4) be re-lettered as proposed §115.430(b)(2), (4), (5), and (6), respectively.

Proposed subsection (b) includes the existing definitions in §115.430 and new definitions related to flexible package printing. Proposed subsection (b) also specifies that unless the context clearly indicates otherwise or unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382), in 30 TAC §§3.2, 101.1, or 115.10, the terms used in this division have the meanings commonly used in the field of air pollution control.

The commission proposes to delete existing §115.430 and replace with updated language for consistency with other Chapter 115 rules.

Proposed §115.430(b)(3) - (6) incorporates the corresponding definitions in existing §115.430(1) - (4) respectively, with only non-substantive changes necessary to comply with current rule formatting standards.

Proposed paragraph (1) defines *Daily weighted average* as the total weight of VOC emissions from all inks and coatings subject to the same VOC content limit in §115.432, divided by the total volume or weight of those materials (minus water and exempt solvent), or divided by the total volume or weight of solids applied to each printing line per day. The proposed definition is intended to clarify the term as used in the existing monitoring and recordkeeping requirements. Additionally, the proposed definition is intended to facilitate compliance with the proposed new control requirements applicable to flexible package printing processes.

Proposed paragraph (2) defines *Flexible package printing* as flexographic or rotogravure printing on any package or part of a package the shape of which can be readily changed including, but not limited to, bags, pouches, liners, and wraps using paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials. Although flexible package printing is not specifically defined in the current rule, the process is represented under the existing definition of packaging rotogravure printing if the package materials are printed on a rotogravure press, or represented under the existing definition of flexographic printing if the package materials are printed on a flexographic press. The commission requests comment on alternative definitions for flexible package printing.

The existing definitions in §115.430(1) - (4) are proposed to be renumbered as §115.430(b)(3) - (6). The commission also proposes revising the term *Flexographic printing process* remove the word *process* for consistency with the other defined terms in this subsection.

Section 115.431, Exemptions

The commission proposes new §115.431 to list the exemptions currently contained in §115.437 that apply to all flexographic and rotogravure printing processes subject to this division and to incorporate the proposed exemptions recommended in the EPA's 2006 Flexible Package Printing CTG. Proposed new §115.431 establishes consistency with other Chapter 115 rules and makes the rule easier to read by clearly identifying the flexographic and rotogravure printing lines that are exempt from all or portions of the subsequent rule requirements. The commission seeks comment on appropriate exemptions for flexible package printing processes in the DFW and HGB areas.

Proposed new subsection (a) lists the exemptions that apply for the BPA, DFW, El Paso, and HGB areas. Proposed new paragraph (1) is the existing exemption in §115.437(a)(1) with non-substantive changes necessary to comply with rule formatting standards.

Proposed new paragraph (2) is the existing exemption in §115.437(2) with non-substantive changes necessary to comply with rule formatting standards.

Proposed new paragraph (3) provides an exemption from the requirements in proposed new §115.432(c) and (d) beginning March 1, 2013, in the DFW and HGB areas for all flexible package printing lines located on a property that have a combined weight of total actual VOC emissions less than 3.0 tpy from all coatings and associated cleaning operations. Properties qualifying for this exemption would not be subject to the more stringent proposed VOC control requirements for flexible package printing but would remain applicable to the existing controls in §115.432(a), unless the property meets another exemption under this section. As discussed elsewhere in this preamble, the commission is not proposing to provide the EPA's 2006 CTG recommendation to completely exempt these flexible package printing processes from the rule requirements. Flexible package printing processes co-located on a property with other flexographic and rotogravure printing processes may already be required to comply with the current Chapter 115 rules; therefore, providing the CTG-recommended exemption could result in backsliding.

Proposed new paragraph (4) provides an exemption from the coating VOC content limits in proposed new §115.432(c) for individual flexible package printing lines with the maximum potential to emit from all coatings less than 25 tpy in the DFW and HGB areas beginning March 1, 2013. As discussed elsewhere in this preamble, the commission is not proposing to incorporate the EPA's 2006 CTG recommendation to exempt these printing lines from all coating VOC content limits. Flexible package printing lines qualifying for this exemption would remain subject to the existing ink VOC control requirements, unless the printing line or printing process meets another exemption under this section, to prevent potential backsliding for units currently required to comply with the Chapter 115 regulations.

Proposed new subsection (b) is the existing exemption in §115.437(b), related to sources in Gregg, Nueces, and Victoria Counties, with only non-substantive edits necessary to comply with current rule formatting standards.

Section 115.432, Control Requirements

The commission proposes amending subsection (a) to clarify that beginning March 1, 2013, the subsection no longer applies to flexible package printing lines in the DFW and HGB areas that are required to comply with the requirements in proposed subsection (c). The proposed amendment prevents flexible package printing lines from being subject to duplicative control requirements. Additionally, proposed subsection (a) incorporates other non-substantive edits necessary to comply with current rule formatting standards.

The commission proposes paragraph (1) to replace the text in existing paragraph (1) with updated language to require that the owner or operator shall limit the VOC emissions from solvent-containing ink used on each packaging rotogravure, publication rotogravure, flexible package, and flexographic printing lines by using one of the options in subparagraphs (A), (B), or (C). Proposed paragraph (1) affects the same printing lines as existing paragraph (1) but adds flexible package printing lines to clarify that these printing lines remain subject to the control requirements in this paragraph if not subject to the new control requirements in subsection (c). The commission solicits comment on whether proposed paragraph (1) changes the printing lines affected by the existing requirements in §115.432(a)(1).

The commission proposes non-substantive changes to subparagraphs (A) - (C) necessary to comply with current rule formatting standards. In addition, the commission proposes minor amendments to subparagraph (C) to replace the phrase *shall be required to provide for* with *must achieve* and *reduction in VOC emissions* with *control efficiency.* The proposed changes update the existing language to establish consistency with terminology used in the proposed requirements for this division and other Chapter 115 rules. The proposed changes are not intended to alter the meaning of this requirement.

Proposed clause (iv) would specify that flexible package printing processes using a vapor control system must continue to comply with the overall control efficiency requirement corresponding to the type of press used to conduct the printing. The proposed clause (iv) is intended to provide clarification and is not intended to impose additional requirements on flexible package printing owners and operators.

The commission proposes amending paragraph (2) to replace *Any graphic arts facility that becomes* with *All flexographic and rotogravure printing lines that become.* The proposed change more appropriately refers to the processes affected by this provision. The commission also proposes to revise this paragraph to indicate that the project must meet one of the requirements in subparagraphs (A) or (B). The proposed non-substantive changes to paragraph (2) and subparagraphs (A) and (B) are intended to clarify the provisions and are necessary to comply with current rule formatting standards.

The commission proposes replacing subsection (b) with updated language to indicate that in Gregg, Nueces, and Victoria Counties, the owner or operator shall limit the VOC emissions from solvent-containing ink used on each packaging rotogravure, publication rotogravure, flexible package, and flexographic printing lines by using one of the options in this subsection. The acknowledgement of flexible package printing in the subsection is intended for clarification and is not intended impose any additional requirements since this printing process is currently subject to the requirements corresponding to the type of press used to conduct the flexible package material printing.

The commission proposes non-substantive changes to paragraphs (1) - (3) necessary to comply with rule formatting standards. In addition, the commission proposes minor amendments to paragraph (3) to replace the phrase *shall be required to provide for* with *must achieve* and *reduction in VOC emissions* with *control efficiency.* The proposed changes update the existing language with terminology used for consistency with other Chapter 115 rules. The proposed changes are not intended to alter the meaning of this requirement.

The commission proposes subparagraph (D) to indicate that a flexible package printing process must meet the overall control efficiency in subparagraph (B) or (C), depending on the type of press used. Flexible package printing processes are currently required to meet either the packaging rotogravure printing process overall control efficiency if the flexible package materials are printed on a rotogravure press, or the flexographic printing overall control efficiency if the flexible package materials are printed on a flexographic press.

The commission proposes subsection (c) to indicate that beginning March 1, 2013, in the DFW and HGB areas, the control requirements would apply to each flexible package printing line, unless specifically exempt in §115.431. Except as specifically discussed elsewhere in this preamble, proposed subsection (c) would implement the EPA's recommendations in the 2006 Flexible Package Printing CTG that the commission has determined are RACT.

Proposed paragraph (1) requires the owner or operator to limit the VOC emissions from coatings applied on each flexible package printing line by using one of the options in subparagraphs (A) - (C). Proposed paragraph (1) indicates that these limitations are based on the daily weighted average. Determining the VOC content of coatings applied to flexible package materials on a daily weighted average is the suggested averaging period in the EPA's 2006 CTG. The commission seeks comment on appropriate averaging periods to demonstrate compliance with the VOC limits in this paragraph.

Proposed subparagraph (A) limits the VOC content of the coatings to 0.8 pound of VOC per pound of solids applied. Proposed subparagraph (A) indicates that the VOC content limits can be met through the use of low-VOC materials or a combination of low-VOC materials and a vapor control system.

Proposed subparagraph (B) limits the VOC content of the coatings to 0.16 pounds of VOC per pound of material. Proposed subparagraph (B) indicates that the VOC content limits can be

met through the use of low-VOC materials or a combination of low-VOC materials and a vapor control system.

Proposed subparagraph (C) would require the operation of a vapor control system to achieve an overall control efficiency of at least 80% by weight. This option provides an alternative method for affected flexible package printers where low-VOC coatings are not sufficient to achieve the desired product quality or efficacy. As discussed elsewhere in this preamble, the commission is not proposing to implement the EPA's CTG recommendation to correlate the overall control efficiency of add-on control equipment with the date the equipment was first installed. The most stringent CTG recommendation for the overall control efficiency of add-on controls in the CTG is 80%. The commission expects that affected flexible package printers choosing to comply with the control requirement in proposed subparagraph (C) are sources with control equipment capable of meeting at least an 80% overall control efficiency.

Proposed paragraph (2) would specify that a flexible package printing line that becomes subject to paragraph (1) by exceeding the exemption limits in §115.431(a) is subject to the provisions of this subsection even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with paragraph (1) of this subsection and one of the conditions in subparagraphs (A) or (B) is met.

Proposed subparagraph (A) would require the project that caused throughput or the emission rate to fall below the exemption limits in §115.431(a) to be authorized by a permit, permit amendment, standard permit, or permit by rule required by 30 TAC Chapters 106 or 116. Proposed subparagraph (A) would also specify that if a permit by rule is available for the project, the owner or operator shall continue to comply with paragraph (1) of this subsection for 30 days after the filing of documentation of compliance with that permit by rule.

Proposed subparagraph (B) would require that if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing. This is an existing requirement for printing lines subject to the requirements in subsection (a), and the commission is proposing to incorporate the same provision in proposed subsection (c).

Proposed paragraph (3) requires an owner or operator applying low-VOC coatings in combination with a vapor control system to meet the VOC emission limits in paragraph (1) of this subsection using the equation provided. This proposed new control requirement is necessary to demonstrate that the overall control efficiency of the vapor control system, when used in conjunction with low-VOC coatings, is sufficient to meet the VOC emission limit in §115.432(c). Proposed paragraph (3) contains the equation to determine the overall control efficiency needed to meet the VOC emission limits in §115.432. The equation proposed in paragraph (3) is the same as the equation in existing §115.423(3)(A) with revision to accommodate the VOC emission limit units. The proposed paragraph also requires control device and capture efficiency testing to be performed in accordance with the testing requirements in §115.435(a). The commission seeks comment on alternative methods for demonstrating compliance with the option to apply low-VOC coatings in combination with a vapor control system.

Proposed subsection (d) would require the owner or operator of a flexible package printing process to implement the work practices in paragraphs (1) and (2) for cleaning materials. Proposed paragraph (1) would require keeping all cleaning solvents and used shop towels in closed containers. Proposed paragraph (2) would require conveying cleaning solvents from one location to another in closed containers or pipes. The commission requests comment on adequate work practice procedures for cleaning materials associated with flexographic and rotogravure printing processes.

Section 115.433, Alternate Control Requirements

The commission proposes revising the existing provisions in §115.433 to consolidate redundant provisions currently located in subsections (a) and (b) under a single "implied (a)" under §115.433. Proposed "implied (a)" in §115.433 would make the provisions for alternate control requirements applicable to the owner or operator of a flexographic or rotogravure printing line subject to this division, regardless of the printing property location. The proposed amendment to §115.433 would apply to the locations currently listed in either existing subsection (a) or (b); the BPA, DFW, El Paso, and HGB areas and Gregg, Nueces, and Victoria Counties.

Section 115.435, Testing Requirements

The commission proposes non-substantive revisions to subsection (a) necessary to comply with rule formatting standards. The commission also proposes to specify that the purpose of the testing requirements in this section are to demonstrate compliance with the control requirements in §115.432. These changes are not intended to alter the meaning of this requirement.

The commission proposes non-substantive changes to paragraphs (1) - (5). The commission proposes revising paragraph (6) to include *as amended through October 18, 1983 (48 FR 48375).* The proposed revision reflects the most recent amendment of this test procedure in the Code of Federal Regulations (CFR).

The commission proposes to renumber the current paragraph (7) as proposed paragraph (8). The existing paragraph (8), regarding minor modifications to the methods, is proposed as paragraph (7).

Non-substantive revisions are proposed for paragraph (8), regarding capture efficiency testing, which are necessary to comply with current rule formatting standards and are not intended to alter the meaning of this requirement. The commission proposes to update proposed paragraph (8) to include *as amended through October 21, 1996 (61 FR 54559).* In subparagraph (A), the commission also proposes to update clause (ii) and subclause (I) to include *as amended through October 17, 2000 (65 FR 61761).* The proposed revision reflects the most recent amendment of this test method in the CFR.

The commission proposes revisions to subparagraph (B)(i) to replace the existing text equation prescribed to determine the overall control efficiency using the gas/gas method for temporary total enclosures (TTEs) with an equation under §115.435(a)(8)(B)(i) to conform to current rule formatting requirements and improve readability of the rule. The proposed equation and the variables used in the calculation are identical to the text equation and variables in current §115.435(a)(7)(B)(i).

The commission proposes revisions to subparagraph (B)(ii) to replace the existing text equation prescribed to determine the overall control efficiency using the liquid/gas method for TTEs with the equation under §115.435(a)(8)(B)(ii) to conform to current rule formatting requirements and improve readability of the

rule. The proposed equation and the variables used in the calculation are identical to the text equation and variables in current §115.435(a)(7)(B)(ii).

The commission proposes revisions to subparagraph (B)(iii) to replace the existing text equation prescribed to determine the overall control efficiency using the gas/gas method for buildings or rooms used as an enclosures with a equation under §115.435(a)(8)(B)(iii) to conform to current rule formatting requirements and improve readability of the rule. The proposed equation and the variables used in the calculation are identical to the text equation and variables in current §115.435(a)(7)(B)(iii).

The commission proposes revisions to subparagraph (B)(iv) to replace the existing text equation prescribed to determine the overall control efficiency using the liquid/gas method for buildings or rooms used as an enclosures with the equation under §115.435(a)(8)(B)(iv) to conform to current rule formatting requirements and improve readability of the rule. The proposed equation and the variables used in the calculation are identical to the text equation and variables in current §115.435(a)(7)(B)(iv).

The commission proposes removing the language in existing subparagraph (C)(i) - (iii) and replacing it with language that requires the operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.436(a) that must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. Proposed subparagraph (C) states that the executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test. Proposed subparagraph (C) ensures the operational parameters tested in the initial performance test are representative of those during normal operation and consolidates the necessary provisions from subparagraph (C)(i) - (iii). Proposed subparagraph (C) should not substantively change the requirements for any facilities currently subject to the rule; however, the commission requests comment on proposed subparagraph (C).

The commission proposes to delete subparagraph (C)(i) regarding the prohibition on incorporating any error margin from the test into the results of the capture efficiency test. While the commission considers it inappropriate to include an error margin in the test results, it is not necessary to specifically include this prohibition in the rule.

The commission proposes to delete existing subparagraph (C)(ii) because the requirement is no longer necessary since the date to accomplish the initial capture efficiency testing for the owner or operator of an affected rotogravure or flexographic printing line has already passed. The proposed revision deletes language made obsolete by the passing of the initial capture efficiency compliance date.

The commission proposes to delete the language in existing subparagraph (C)(iii) regarding identification of the monitored parameters during the initial pretest meeting. As discussed elsewhere in this preamble, the monitoring parameters for the capture systems along with other control devices are addressed under the existing provisions in §115.436, and it is unnecessary to include the provisions in current subparagraph (C)(iii). Furthermore, a pretest meeting with the source owner or operator may not always occur.

The commission proposes non-substantive revisions to subsection (b)(1) - (5) necessary to comply with rule formatting requirements that are not intended to alter the meaning of this provision. Additionally, the commission proposes updating paragraph (6) to reflect the most recent amendment of testing procedures in the CFR.

The commission proposes subsection (c) to allow methods other than those specified in subsections (a)(1) - (6) and (b)(1) - (6) to be used if the alternative methods have been approved by the executive director and validated according to Method 301. The proposed provision for alternative methods is similar to alternative method provisions in other Chapter 115 rules.

Section 115.436, Monitoring and Recordkeeping Requirements

The commission proposes deleting the existing language in subsection (a) and replacing with updated text to indicate that in the BPA, DFW, El Paso, and HGB areas, the owner or operator of a rotogravure or flexographic printing line subject to this division shall comply with the monitoring and recordkeeping requirements in paragraphs (1) - (6). The proposed revision is not intended to alter the meaning of the existing language in subsection (a). The commission also proposes non-substantive revisions to paragraphs (1) - (6) to update language necessary to comply with rule formatting standards.

Additionally, the commission proposes revisions to paragraph (3) to remove the term *emission* from *emission control device* because control device is the term defined in §101.1. The proposed rule change provides clear and consistent use of terminology throughout the rule and is not intended to change the meaning of this requirement.

The commission proposes a non-substantive revision to paragraph (6) necessary to comply with rule formatting standards and to update the reference to §115.435 to reflect the proposed renumbering of exiting subsection (a)(7) to proposed subsection (a)(8).

The commission proposes non-substantive changes to subsection (b) and paragraphs (1) - (5) to update rule language consistent with rule formatting standards and to update references. In subsection (b), the commission proposes replacing the term *facility* with *line* to provide clear and consistent use of terminology throughout the rule. These changes are not intended to alter the meaning of this requirement.

The commission proposes revising paragraph (3) to remove the term *emission* from *emission control device* because control device is the term defined in §101.1. The proposed rule change provides clear and consistent use of terminology throughout the rule and is not intended to change the meaning of this requirement.

Proposed subsection (c) would require, beginning March 1, 2013, in the DFW and HGB areas, the owner or operator of a flexible package printing line subject to this division to comply with the monitoring and recordkeeping requirements contained in paragraphs (1) - (6). The proposed paragraphs impose identical monitoring and recordkeeping requirements for coatings, including inks and adhesives, as the requirements in subsection (a) specify for inks, except for the requirement in paragraph (2). The separate subsection for coatings used during flexible package printing is necessary to prevent requiring additional monitoring and recordkeeping for the other printing operations subject to the division but not affected by this rulemaking.

Proposed paragraph (1) requires maintaining records of the VOC content of all coatings as applied to the substrate. The proposed paragraph requires records of the quantity of each coating used to be maintained. Proposed paragraph (1) also allows the com-

position of coatings to be determined by using the test methods approved in §115.435(a) or by examining the manufacturer's formulation data and documenting the amount of dilution solvent added to adjust the viscosity of coatings prior to application to the substrate.

Proposed paragraph (2) requires maintaining records of the quantity and type of each coating and solvent consumed if any of the coatings, as applied, exceed the applicable VOC content limits. Proposed paragraph (2) also requires that records must be sufficient to demonstrate compliance with the applicable VOC content limit on a daily weighted average. The proposed new recordkeeping requirement ensures the owner or operator maintains documentation sufficient to demonstrate that when all coatings applied are calculated on a daily weighted average, the VOC content does not exceed the applicable limits in §115.432(c).

Proposed paragraph (3) requires that monitors be installed and maintained to continuously measure and record operational parameters of any control device installed to meet the applicable control requirements in §115.432(c). Proposed paragraph (3) also requires that such records must be sufficient to demonstrate proper functioning of those devices to design specifications and include documentation of the provisions in proposed subparagraphs (A) - (D). Proposed subparagraph (A) specifies the exhaust gas temperature of direct-flame incinerators or gas temperature immediately upstream and downstream of any catalyst bed. Proposed subparagraph (B) specifies the total amount of VOC recovered by a carbon adsorption or other solvent recovery system during a calendar month. Proposed subparagraph (C) specifies the exhaust gas VOC concentration of any carbon adsorption system to determine if breakthrough has occurred. Proposed subparagraph (D) specifies the dates and reasons for any maintenance and repair of the required control devices and the estimated quantity and duration of VOC emissions during such activities.

Proposed paragraph (4) requires the results of any testing conducted at an affected facility in accordance with the provisions specified in §115.435(a) be maintained.

Proposed paragraph (5) requires that all records at the affected site be maintained for at least two years and such records be made available upon request to authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction.

Proposed paragraph (6) requires the capture efficiency protocol under §115.435(a)(8) be maintained on file. Proposed paragraph (6) directs the owner or operator to submit all results of the test methods and capture efficiency operating parameter values on-site for a minimum of one year. Additionally, proposed paragraph (6) requires that if any changes are made to the capture or control equipment, the owner or operator is required to notify the executive director in writing within 30 days of these changes, and a new capture efficiency or control device destruction or removal efficiency test may be required.

Section 115.437, Exemptions

The commission proposes the repeal of §115.437. As discussed elsewhere in the Section by Section Discussion portion of this preamble, the commission is proposing to move the exemptions currently listed in §115.437 to proposed new §115.431, to improve readability of the rule by listing the exemptions before the rule requirements.

Section 115.439, Counties and Compliance Schedules

The commission proposes amending subsection (a) to clarify that the existing language indicates the compliance date for flexographic and rotogravure printing lines in the specified locations has passed, except the compliance date for flexible package printing processes affected by subsections (c) and (d).

The commission proposes amending subsection (b) to clarify that the owner or operator of a flexible package printing process affected by the proposed rule requirements is not required to be in compliance until the dates specified in subsections (c) and (d).

Proposed subsection (c) requires the owner or operator of a flexible package printing line in the DFW and HGB areas to comply with the requirements in §115.432(c) and (d) and §115.436(c), no later than March 1, 2013. The March 1, 2013, compliance date provides affected owners and operators approximately a year and a half to make any necessary changes and ensures that any VOC emission reductions achieved by the proposed rule will occur prior to the ozone season in the DFW area. Proposed subsection (c) would also specify that any testing required by §115.435 to demonstrate compliance with the requirements in proposed §115.432(c) must be completed and results submitted by no later than March 1, 2013. The commission requests comment on appropriate compliance dates for the proposed requirements.

Proposed subsection (d) requires the owner or operator of a flexible package printing line in the DFW and HGB areas that becomes subject to the requirements in this division after March 1, 2013, to comply with the requirements in this division no later than 60 days after becoming subject. The commission is requesting comment on the adequacy of the time provided for newly affected facilities to comply with the proposed requirements.

SUBCHAPTER E, SOLVENT-USING PROCESSES

DIVISION 5, CONTROL REQUIREMENTS FOR SURFACE COATING PROCESSES

Section 115.450, Applicability and Definitions

The commission proposes new §115.450, to clearly identify the surface coating processes affected by the requirements in this division and to define the terms relevant to those surface coating processes.

Proposed new subsection (a) specifies that the requirements in this division apply to the surface coating processes listed in paragraphs (1) - (6) in the DFW and HGB areas and to the coating process listed in paragraph (7) in the DFW area. The commission is not proposing to apply the requirements to automobile and light-duty truck assembly coating processes in the HGB area because there are no facilities in the HGB area that would be subject to this CTG category. The commission has previously submitted a negative declaration for the automobile and light-duty truck assembly coating process category for the HGB area.

Proposed new paragraphs (1) and (2) list large appliance surface coating processes and metal furniture surface coating processes, respectively. The proposed applicability for large appliance and metal furniture surface coating operations is not limited to the manufacturers of these parts and products; any operation involving the coating of these substrates is subject to the proposed rule requirements. The proposed applicability in para-

graphs (1) and (2) retains the existing applicability for these coating operations, as defined in existing §115.420(b)(6) and (7).

Proposed new paragraph (3) specifies that this division applies to miscellaneous metal part and product coating at the original equipment manufacturer, off-site job shops that coat new and used parts and products or that recoat used parts and products, and designated on-site maintenance shops that recoat used parts and products. For the purpose of this proposed rule, off-site job shops constitute locations that coat new miscellaneous metal parts or products and that recoat used miscellaneous metal parts or products on a contractual basis. A designated on-site maintenance shop is an area designated at a site where coatings are applied to one or more miscellaneous metal parts or products on a routine basis. Proposed new paragraph (3) retains the applicability as defined in existing §115.420(b)(9)(F) for miscellaneous metal parts and products. Proposed new paragraph (4) specifies that this division applies to miscellaneous plastic part and product coating, pleasure craft coating, and automotive/transportation and business machine plastic part coating at the original equipment manufacturer and off-site job shops that coat new parts and products or that recoat used parts and products. The proposed rule applicability is the same as the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG recommendation. Proposed new paragraph (5) specifies that this division applies to motor vehicle materials applied to metal and plastic parts described in paragraphs (3) and (4) at the original equipment manufacturer and off-site job shops that coat new parts and products or that recoat used parts and products during an operation other than an automobile and light-duty truck assembly coating process. The proposed rule applicability is the same as recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG.

Proposed new paragraph (6) specifies that this division applies to paper, film, and foil coating lines with the potential to emit from all coatings of VOC greater than or equal to 25 tpy when uncontrolled. The proposed applicability threshold is the same as recommended in the EPA's 2007 Paper, Film, and Foil Coatings CTG.

Proposed new paragraph (7) specifies that this division applies to automobile and light-duty truck assembly coating processes conducted by the original equipment manufacturer in the DFW area. Automobile and light-duty truck manufacturing coating is currently subject to Chapter 115, as defined in existing §115.420(b)(8)(A). Proposed new paragraph (7) also incorporates operators that conduct automobile and light-duty truck coating processes under contract with the original equipment manufacturer in the DFW area into the rule applicability. The contract coaters referred to are those that coat new automobile and light-duty truck bodies, body parts for new automobiles or new light-duty trucks, and other parts that are coated along with these bodies or body parts under contract with the original equipment manufacturer. The proposed applicability is recommended in the EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG. The commission requests comment on the appropriate applicability for operators that coat new automobile and light-duty truck bodies, body parts for new automobiles or new light-duty trucks, and other parts that are coated along with these bodies or body parts under contract with the original equipment manufacturer.

Proposed new subsection (b) includes the general definitions that would apply to proposed new Division 5 and also specifies that unless the context clearly indicates otherwise or unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382), in §§3.2, 101.1, or 115.10, the terms used in this division have the meanings commonly used in the field of air pollution control. Unless specifically discussed, the definitions proposed in this subsection are identical to those in existing §115.420(a). The commission requests comment on any additional definitions that should be included.

Proposed new paragraph (1) defines *Aerosol coating (spray paint)* as a hand-held, pressurized, non-refillable container that expels an adhesive or a coating in a finely divided spray when a valve on the container is depressed.

Proposed new paragraph (2) defines *Air-dried coating* as a coating that is cured at a temperature below 194 degrees Fahrenheit (90 degrees Celsius); these coatings may also be referred to as low-bake coatings. Proposed new paragraph (2) is a definition recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG; however, the commission proposes to include the term as a general definition because it is used in the control requirements section for other coating categories affected by this division.

Proposed new paragraph (3) defines *Baked coating* as a coating that is cured at a temperature at or above 194 degrees Fahrenheit (90 degrees Celsius); these coatings may also be referred to as high-bake coatings. Proposed new paragraph (3) is a definition recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG; however, the commission proposes to include the term as a general definition because it is used in the control requirements section for other coating categories affected by this division. In the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG a high-baked coating is defined as a coating that is cured at a temperature above 194 degrees Fahrenheit (90 degrees Celsius). The commission is requesting comment on the validity of the interpretation that the definition of high-baked coating should be equivalent to the definition of baked coating.

Proposed new paragraph (4) defines *Coating application system* as devices or equipment designed for the purpose of applying a coating material to a surface. The devices may include, but are not limited to, brushes, sprayers, flow coaters, dip tanks, rollers, knife coaters, and extrusion coaters.

Proposed new paragraph (5) defines *Coating line* as an operation consisting of a series of one or more coating application systems and associated flash-off area(s), drying area(s), and oven(s) wherein a surface coating is applied, dried, or cured. The coating line ends at the point the coating is dried or cured, or prior to any subsequent application of a different coating.

Proposed new paragraph (6) defines *Coating solids (or solids)* as the part of a coating that remains on the substrate after the coating is dried or cured.

Proposed new paragraph (7) defines *Daily weighted average* as the total weight of VOC emissions from all coatings subject to the same VOC limit, divided by the total volume or weight of those coatings (minus water and exempt solvent), or divided by the total volume or weight of solids, delivered to the application system each day. Proposed new paragraph (7) indicates that coatings subject to different VOC content limits in §115.453 must not be combined for purposes of calculating the daily weighted average. Proposed new paragraph (7) retains the method for determining the daily weighted average consistent with the existing definition in §115.420(a)(6) but accommodates weight units because the

paper, film, and foil coating category VOC content limits are provided in pounds.

Proposed new paragraph (8) defines *Multi-component* coating as a coating that requires the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film. Proposed new paragraph (8) is a definition recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG; however, the commission proposes to include the term as a general definition because it is used in the control requirements section for other coating categories affected by this division.

Proposed new paragraph (9) defines *Normally closed container* as a container that is closed unless an operator is actively engaged in activities such as adding or removing material.

Proposed new paragraph (10) defines *One-component coating* as a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component. Proposed new paragraph (10) is a definition recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG; however, the commission proposes to include the term as a general definition because it is used in the control requirements section for other coating categories affected by this division.

Proposed new paragraph (11) defines *Pounds of volatile organic compounds (VOC) per gallon of coating (minus water and exempt solvents)* as the basis for emission limits for surface coating processes. Proposed new paragraph (11) retains the definition of pounds of VOC per gallon of coating as defined in existing §115.420(a)(9) with non-substantive changes that are not intended to alter the meaning of this definition. The proposed definition in paragraph (11) includes the equation to calculate pounds of VOC per gallon of coating (minus water and exempt compounds) using values obtained from testing data or analytical data from the material safety data sheet (MSDS). Explanations of the variables follow the equation.

Proposed new paragraph (12) defines *Pounds of volatile organic compounds (VOC) per gallon of solids* as the basis for emission limits for surface coating processes. Proposed new paragraph (12) retains the definition of pounds of VOC per gallon of solids as defined in existing §115.420(a)(10) with non-substantive changes that are not intended to alter the meaning of this definition. The proposed definition in paragraph (12) includes the equation to calculate pounds of VOC per gallon of solids using values obtained from testing data or analytical data from the MSDS. Explanations of the variables follow the equation.

Proposed new paragraph (13) defines *Spray gun* as a device that atomizes a coating or other material and projects the particulates or other material onto a substrate.

Proposed new paragraph (14) defines *Surface coating processes* as operations that use a coating application system.

Proposed new subsection (c) provides specific surface coating definitions that are unique to each surface coating operation proposed for regulation in this division. Unless specifically discussed, the proposed definitions in this section are recommended in the EPA's CTG documents related to the surface coating categories subject to this division. The commission requests comment on any additional definitions that should be included in this proposed new subsection.

Proposed new paragraph (1) defines the terms that apply to automobile and light-duty truck manufacturing. The terms defined in proposed new subparagraphs (A) - (T) include: *Adhesive; Automobile assembly coating process; Automobile and light-duty truck adhesive; Automobile and light-duty truck bedliner; Automobile and light-duty truck cavity wax; Automobile and light-duty truck deadener; Automobile and light-duty truck gasket/gasket sealing material; Automobile and light-duty truck glass-bonding primer; Automobile and light-duty truck lubricating wax/compound; Automobile and light-duty truck sealer; Automobile and light-duty truck trunk interior coating; Automobile and light-duty truck underbody coating; Automobile and light-duty truck weather strip adhesive; Electrodeposition primer; Final repair; In-line repair; Light-duty truck assembly coating process; Primer-surfacer; Topcoat;* and *Solids turnover ratio (RT').* The proposed definitions of these terms are provided in proposed new paragraph (1) and are not specifically discussed in this preamble, except for those specific definitions that are not taken directly from the EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG.

Proposed new subparagraph (M) defines *Automobile assembly coating process* as the assembly-line coating of new passenger cars, or passenger car derivatives, capable of seating 12 or fewer passengers. This definition is derived from the existing definition of *automobile coating* in §115.420(b)(12)(A)(i).

Proposed new subparagraph (Q) defines *Light-duty truck assembly coating process* as the assembly-line coating of new motor vehicles rated at 8,500 pounds gross vehicle weight or less and designed primarily for the transportation of property, or derivatives such as pickups, vans, and window vans. This definition is derived from the existing definition of *light-duty truck coating* in §115.420(b)(12)(A)(ii).

Proposed new paragraph (2) defines the terms that apply to automotive/transportation and business machine plastic parts. The terms defined in proposed new subparagraphs (A) - (O) include: *Adhesion prime; Black coating; Business machine; Clear coating; Coating of plastic parts of automobiles and trucks; Coating of plastic parts of business machines; Electrostatic prep coat; Flexible coating; Fog coat; Gloss reducer; Red coating; Resist coat; Stencil coat; Texture coat;* and *Vacuum-metalizing coatings.* The proposed definitions of these terms are provided in proposed new paragraph (2) and are not specifically discussed in this preamble. The definitions are taken directly from the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG without substantive change.

Proposed new paragraph (3) defines *Large appliance coating* as 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. Proposed new paragraph (3) retains the definition for large appliance coating as defined in existing §115.420(b)(6) without revision. Although the 2007 Large Appliance Coatings CTG recommends VOC emission limits for specific coating categories, the CTG document does not include definitions for these specific coating categories. The definitions in proposed new subparagraphs (A) - (F) incorporate the definitions recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG for similar coating categories with minor non-substantive changes necessary to conform to current rule formatting standards. The proposed definitions of these terms are provided in proposed new paragraph (3) and are not specifically discussed in this preamble. The definitions in proposed new subparagraphs (A) - (F) include: *Extreme high-gloss coating; Extreme performance coat-*

ing; Heat-resistant coating; Metallic coating; Pretreatment coating; and *Solar-absorbent coating.*

Proposed new paragraph (4) defines *Metal furniture* as the coating of metal furniture including, but not limited, to tables, chairs, wastebaskets, beds, desks, lockers, benches, shelves, file cabinets, lamps, and other metal furniture products or the coating of any metal part that will be a part of a nonmetal furniture product. Proposed new paragraph (4) retains the definition is existing §115.420(b)(7) without revision. Although the 2007 Metal Furniture Coatings CTG recommends VOC emission limits for specific coating categories, the CTG document does not include definitions for these specific coating categories. The definitions in proposed new subparagraphs (A) - (F) incorporate the definitions recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG for similar coating categories with minor non-substantive changes necessary to conform to current rule formatting standards. The proposed definitions of these terms are provided in proposed new paragraph (4) and are not specifically discussed in this preamble. The definitions in proposed new subparagraphs (A) - (F) include: *Extreme high-gloss coating; Extreme performance coating; Heat-resistant coating; Metallic coating; Pretreatment coating;* and *Solar-absorbent coating.*

Proposed new paragraph (5) lists the defined terms that apply to miscellaneous metal and plastic parts. Unless specifically discussed, the definitions in proposed new paragraph (5) incorporate the definitions recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG with minor non-substantive changes necessary to conform to current rule formatting standards. The terms defined in proposed new subparagraphs (A) - (FF) include: *Camouflage coating; Clear coat; Drum (metal); Electric-dissipating coating; Electric-insulting varnish; EMI/RFI shielding; Etching filler; Extreme high-gloss coating; Extreme performance coating; Heat-resistant coating; High performance architectural coating; High temperature coating; Mask coating; Metallic coating; Military specification coating; Mold-seal coating; Miscellaneous metal parts and products; Multi-colored coating; Off-site job shop; Optical coating; Pail (metal); Pan-backing coating; Prefabricated architectural component coating; Pretreatment coating; Repair coating; Shock-free coating; Silicone-release coating; Solar-absorbent coating; Stencil; Touch-up coating; Translucent coating;* and *Vacuum-metalizing coating.* The proposed definitions of these terms are provided in proposed new paragraph (5) and are not specifically discussed in this preamble, except for those definitions that are not directly from the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG or that the commission is proposing a modification to the definition in the CTG.

The definition of *Clear coat* in proposed new subparagraph (B) is a coating that lacks opacity or is transparent and may or may not have an undercoat that is used as a reflectant base or undertone color. This definition is identical to the existing definition in §115.420(b)(9)(A). The EPA's 2008 CTG provides a recommended definition for clear coat; however, revising it to reflect the CTG-recommended definition is unnecessary since the definition for the term in Chapter 115 and the CTG are synonymous. The commission requests comment on any discontinuity between the existing definition of clear coat and the CTG-recommended definition.

The definition of *Drum (metal)* in proposed new subparagraph (C) is 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). The EPA's 2008 CTG provides a recommended definition for a drum; however, revising it to reflect the CTG-recommended definition is unnecessary since the definition for the term in Chapter 115 and the CTG are synonymous. The commission requests comment on any discontinuity between the existing definition of clear coat and the CTG-recommended definition.

The definition of *Miscellaneous metal parts and products* in proposed new subparagraph (Q) is those specific parts and products listed in clauses (i) - (vii). Proposed new subparagraph (Q) retains the definition in existing §115.420(b)(9) with revision to delete the locations that are affected by the miscellaneous metal parts and products coating rule requirements. The affected locations are more appropriately described in the subsection (a). Proposed new clause (i) identifies large farm machinery (harvesting, fertilizing, and planting machines; tractors, combines, etc.). Proposed new clause (ii) identifies small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.). Proposed new clause (iii) identifies small appliances (fans, mixers, blenders, crock pots, dehumidifiers, vacuum cleaners, etc.). Proposed new clause (iv) identifies commercial machinery (computers and auxiliary equipment, typewriters, calculators, vending machines, etc.). Proposed new clause (v) identifies industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.). Proposed new clause (vi) identifies fabricated metal products (metal-covered doors, frames, etc.). Proposed new clause (vii) identifies any other category of coated metal products, including, but not limited to, those that 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 Subchapter E, Division 2, and in paragraphs (1) - (4) and (6) - (8) of this subsection.

The definition of *Off-site job shop* in proposed new subparagraph (S) is a non-manufacturer of metal or plastic parts and products that applies coatings to such products at a site exclusively under contract with one or more parties that operate under separate ownership and control. This definition is not an existing definition and is not recommended in the EPA's Miscellaneous Metal and Plastic Parts CTG. The commission is proposing this definition to describe the intended meaning of an off-site job shop as described in the Rule Interpretation Team document Number R5-421.005, concerning the applicability of the miscellaneous metal parts and products surface coating rules.

Proposed new subparagraph (U) defines *Pail (metal)* as any cylindrical metal shipping container with a capacity equal to or greater than 1.0 gallon (3.8 liters) but less than 12 gallons (45.4 liters) and constructed of 29 gauge or heavier material. The proposed definition is not recommended in the Miscellaneous Metal and Plastic Parts Coating CTG. Proposed new subparagraph (U) retains the definition of pail in existing §115.420(b)(9)(G) without revision because the coating of pails is still considered a miscellaneous metal part coating operation.

Proposed new paragraph (6) defines the terms that apply to motor vehicle materials. The terms defined in proposed new subparagraphs (A) - (H) include: *Motor vehicle bedliner; Motor vehicle cavity wax; Motor vehicle deadener; Motor vehicle gasket/sealing material; Motor vehicle lubricating wax/compound;*

Motor vehicle sealer; Motor vehicle trunk interior coating; and *Motor vehicle underbody coating.* The proposed definitions of these terms are provided in proposed new paragraph (6) and are not specifically discussed in this preamble. The definitions are taken directly from the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG with changes to replace the term *facility* with *process.* The proposed changes more appropriately reflect that motor vehicle materials applied to substrates other than automobiles or light-duty trucks during assembly line-coating would be subject to the requirements corresponding to motor vehicle materials regardless of the process location.

Proposed new paragraph (7) defines *Paper, film, and foil coating* as the coating of paper and pressure-sensitive tapes (regardless of substrate and including paper, fabric, and plastic film), related web coating processes on plastic film (including typewriter ribbons, photographic film, and magnetic tape), metal foil (including decorative, gift wrap, and packaging), industrial and decorative laminates, abrasive products (including fabric coated for use in abrasive products), and flexible packaging. Paper, film, and foil coating includes the application of a continuous layer of a coating material across the entire width or any portion of the width of a paper, film, or foil web substrate to: provide a covering, finish, or functional or protective layer to the substrate; saturate the substrate for lamination; or provide adhesion between two substrates for lamination. Paper, film, and foil coating does not include coating performed on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press. In addition, size presses and on-machine coaters that function as part of an in-line papermaking system are not included. Proposed new paragraph (7) incorporates the EPA's 2007 Paper, Film, and Foil CTG process description to supplement the existing definition of paper coating in §115.420(b)(10). The added language is intended to clearly distinguish between processes considered paper, film, and foil coating and processes that include coating on paper, film, and foil but that would not be considered a coating process and therefore would not be subject to the requirements referring to paper, film, and foil coating. Additionally, the EPA's 2007 CTG considers fabric coating and vinyl coating a paper, film, and foil coating process; however, the commission interprets the applicability of fabric and vinyl coating under paper, film, and foil coating to be limited to certain fabric and vinyl coating operations. Under this interpretation, some facilities may be subject to paper, film, and foil under Division 5 while others may remain subject to the Division 2 fabric and vinyl coating requirements in Division 2, depending on the particular coating operation. The commission requests comment on dual applicability for fabric and vinyl coating process applicability in the proposed new rules with the fabric and vinyl coating applicability in Division 2.

Proposed new paragraph (8) defines the terms that apply to pleasure craft. Proposed new paragraph (8) defines *Pleasure craft* as any marine or fresh-water vessel used by individuals for noncommercial, nonmilitary, and recreational purposes that is less than 65.6 feet (20 meters) in length. Proposed new paragraph (8) clarifies that a vessel rented exclusively to, or chartered for, individuals for such purposes is considered a pleasure craft. Proposed new paragraph (8) retains the existing definition of pleasure craft in existing §115.420(b)(11)(U) without substantive revision to maintain consistency with the existing Chapter 115 rules. The terms defined in proposed new subparagraphs (A) - (H) include: *Antifoulant coating; Extreme high-gloss coating; Finish primer-surface; High build primer-surface; High-gloss coating; Pleasure craft coating; Pretreatment wash primer;* and *Topcoat.* The definitions are taken directly from the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG without substantive change. The proposed definitions of these terms are provided in the proposed new paragraph (8) and are not specifically discussed in this preamble.

Section 115.451, Exemptions

The commission proposes new §115.451, to list the exemptions that apply to the owner or operator of a surface coating process subject to this division. Proposed new §115.451 provides the same exemptions for the surface coating processes that are currently located in existing §115.427(a) and incorporates the new exemptions recommended in the CTG documents associated with the surface coating processes affected by this division. The commission seeks comment on appropriate exemptions for the various surface coating processes in the DFW and HGB areas.

Proposed new paragraph (1) excludes from the VOC emission calculations the coatings and solvents used in coating activities and associated cleaning operations not addressed by the surface coating categories in §115.421(a)(3), (5) - (8)(A), and (10) - (15) or §115.453. Proposed new §115.451(1) includes, as an example, that architectural coatings applied in the field to stationary structures and their appurtenances, to portable buildings, to pavements, or to curbs at a property would not be included in the calculations. The proposed exemption retains the criteria in existing §115.427(a)(3) with non-substantive revision to ensure that the coating categories proposed for re-location in Division 5 remain affected by this provision. This is an existing Chapter 115 exemption and not recommended in the EPA's CTG documents.

Proposed new subparagraph (A) exempts all surface coating processes on a property that, when uncontrolled, will emit a combined weight of VOC of less than 3.0 pounds per hour and 15 pounds per day in any consecutive 24-hour period from the control requirements in §115.453. As discussed elsewhere in this preamble, the CTG documents recommend an exemption threshold of 15 pounds per day for each product category. The commission is not proposing the CTG recommendation because the existing exemption criteria in §115.427(a)(3) requires the VOC emissions generated from the coatings and solvents used in all of the surface coating processes in Division 2, unless specifically excluded, be combined to determine exemption from the applicable rule requirements in §115.421(a). Proposed new subparagraph (A) maintains the existing approach implemented in §115.427(a)(3)(A), with revisions to indicate this exemption continues to apply to the processes transitioning from applicability in Division 2 to Division 5.

Proposed new subparagraph (B) exempts surface coating processes on a property that, when uncontrolled, will emit a combined weight of VOC of less than 100 pounds in any consecutive 24-hour period are exempt from §115.453(a), if documentation is provided to, and approved by, both the executive director and the EPA to demonstrate that necessary coating performance criteria cannot be achieved with coatings that satisfy applicable VOC limits and that control equipment is not technically or economically feasible. Proposed new §115.451(1)(B) is the same as the existing Chapter 115 exemption in §115.427(a)(3)(B) and not a CTG recommendation.

Proposed new subparagraph (C) exempts surface coating processes on a property where total coating and solvent usage does not exceed 150 gallons in any consecutive 12-month period from the VOC limits in §115.453(a). The proposed exemption is identical to the current exemption in §115.427(a)(3)(C).

Proposed new paragraph (2) exempts the coating processes in subparagraphs (A) - (C) from the coating VOC limits for miscellaneous metal and plastic part coating in §115.453(a)(1)(C) - (F) and (2). Proposed new subparagraph (A) exempts large appliance coating. Proposed new subparagraph (B) exempts metal furniture coating. Proposed new subparagraph (C) exempts automobile and light-duty truck assembly coating. This exemption clarifies that any part or assembled product specified in subparagraphs (A) - (C) is not considered a miscellaneous metal or plastic part and would not be required to comply with the coating VOC content limits related to this category.

Proposed new paragraph (3) exempts paper, film, and foil coating processes from the coating application system requirements in §115.453(c) and the coating use work practice requirements in §115.453(d)(1), because the 2007 Paper, Film, and Foil Coating CTG document does not recommend coating application methods and does not provide recommendations for work practices associated with coatings and coating-related waste.

Proposed new paragraph (4) exempts automobile and light-duty truck assembly coating processes from the coating application system requirements in §115.453(c) and the cleaning-related work practice requirements specified in §115.453(d)(2). The 2008 Automobile and Light-Duty Truck Assembly Coatings CTG document recommends that the owners and operators of automobile and light-duty truck assembly coating processes develop and implement a work plan for cleaning activities beyond the more general work practice procedures listed in §115.453(d)(2). The 2008 CTG document also does not provide the recommendation to require coatings be applied using specific application systems.

Proposed new paragraph (5) exempts automobile and light-duty truck assembly coating materials supplied in containers with a net volume of 16 ounces or less, or a net weight of 1.0 pound or less, are exempt from the VOC limits in Table 2 under §115.453(a)(3).

Proposed new paragraph (6) provides an exemption for specific miscellaneous metal part and product coatings and coating processes from using the coating application systems required in §115.453(c). The operations exempted under proposed subparagraphs (A) - (G) include: touch-up coatings, repair coatings, and textured finishes; stencil coatings; safety-indicating coatings; solid-film lubricants; electric-insulating and thermal-conducting coatings; magnetic data storage disk coatings; and plastic extruded onto metal parts to form a coating. The commission is not proposing to incorporate the EPA's 2008 Miscellaneous Metal Parts and Products Coatings CTG recommendation to exempt these coatings and coating operations from the coating VOC limits for reasons discussed elsewhere in this preamble. However, the commission requests comment on whether these metal part coatings and coating operations should be exempt from the miscellaneous metal part and product coating VOC content requirements.

Proposed new paragraphs (7) and (8) also exempt specific coatings and operations from the coating application system requirements in §115.453(c). Proposed new paragraph (7) exempts all miscellaneous plastic part airbrush coatings and coating operations where total coating usage is less than 5.0 gallons per year. Proposed new paragraph (8) provides an exemption for pleasure craft coating operations applying extreme high-gloss coatings. The proposed exemptions are recommended in the EPA's 2008 Miscellaneous Metal and Plastic Part Coatings CTG document.

Proposed new paragraph (9) exempts various miscellaneous plastic parts coatings and coating operations from the coating VOC limits in §115.453(a)(1)(D). The coatings and coating operations exempted under proposed new subparagraphs (A) - (H) include: touch-up and repair coatings; stencil coatings applied on clear or transparent substrates; clear or translucent coatings; any individual coating type used in volumes less than 50 gallons in any one year, if substitute compliant coatings are not available, provided that the total usage of all such coatings does not exceed 200 gallons per year, per property; reflective coating applied to highway cones; mask coatings that are less than 0.5 mil thick dried and the area coated is less than 25 square inches; electromagnetic interference (EMI)/radio frequency interference (RFI) shielding coatings; and heparin-benzalkonium chloride (HBAC)-containing coatings applied to medical devices, if the total usage of all such coatings does not exceed 100 gallons per year, per property. The proposed exemptions are recommended in the EPA's 2008 Miscellaneous Metal and Plastic Part Coatings CTG document.

Proposed new paragraph (10) exempts certain automotive/transportation and business machine plastic part coatings and coating operations from the coating VOC limits in §115.453(a). The exemptions in proposed subparagraphs (A) - (H) include: texture coatings; vacuum-metalizing coatings; gloss reducers; texture topcoats; adhesion primers; electrostatic preparation coatings; resist coatings; and stencil coatings. These exemptions are recommended in the Miscellaneous Metal and Plastic Parts Coatings CTG document and are being proposed for inclusion in the exemptions for this division.

Proposed paragraph (11) provides an exemption for powder coatings applied during metal and plastic parts surface coating processes from the requirements in this division, except as specified in §115.458(b)(5). Powder coatings produce minimal VOC emissions and would likely not exceed the VOC control limits designated for each coating type specified in the metal and plastic parts requirements in §115.453(a)(1)(C) - (F) and (2). The commission seeks comment on whether the exemption interferes with the existing coating requirements for miscellaneous metal parts and products coatings.

Proposed new paragraph (12) exempts aerosol coatings (spray paint) from this division. The proposed exemption is identical to the exemption in existing §115.427(a)(6).

Proposed new paragraph (13) exempts coatings applied to test panels and coupons as part of research and development, quality control, or performance-testing activities at paint research or manufacturing properties from the requirements in this division. The proposed exemption is a recommendation provided in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG.

Section 115.453, Control Requirements

The commission proposes new §115.453, to implement the EPA's CTG recommendations related to the surface coating categories proposed for regulation in this division, unless specifically discussed.

Proposed new subsection (a) states that the control requirements in this subsection apply to the surface coating processes subject to this division. Except as specified in paragraph (3), these limitations are based on the daily weighted average of coatings delivered to the application system. Proposed new §115.453(a) excludes paragraph (3) to clarify that determination of compliance with the certain VOC limits pertaining to

automobile and light-duty truck assembly coatings are based on averaging approaches unique to that industrial category. The daily weighted average approach is consistent with both the existing method of determining compliance with the VOC control limits and the averaging period suggested in the CTG documents for the coating categories subject to this division.

Proposed new paragraph (1) requires the owner or operator to limit VOC emissions from all coatings in each of the coating categories in this paragraph. Proposed new paragraph (1) requires that the limits must be met by applying low-VOC coatings to meet the specified VOC content limits on a lb VOC/gal of coating basis, as delivered to the application system (minus water and exempt solvent), or by applying low-VOC coatings and operating a vapor control system to meet the specified VOC emission limits on a lb VOC/gal of solids basis.

The commission proposes new subparagraph (A) to specify the VOC limits that apply to the specified large appliance coating types. As discussed in the *Demonstrating Noninterference Under FCAA, Section 110(l)* portion of the Background and Summary of the Factual Basis for the Proposed Rules section of this preamble, the proposed VOC limits achieve an overall emissions reduction from the existing VOC emission limits in §115.421(a) for large appliance coatings and have been determined by the commission to be RACT. Subparagraph (A) contains two tables with the VOC limits for various large appliance coating types. Table 1 presents the VOC content limits on a pound of VOC per gallon of coating basis, and Table 2 presents the equivalent VOC emission limits on a lb VOC/gal of solids basis. Although not recommended in the 2007 Large Appliance Coatings CTG, proposed subparagraph (A) requires that if a coating does not meet a specific coating type definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.

The commission proposes new subparagraph (B) to specify the VOC limits that apply to the specified metal furniture coating types. As discussed in the *Demonstrating Noninterference Under FCAA, Section 110(l)* portion of the Background and Summary of the Factual Basis for the Proposed Rules section of this preamble, the proposed VOC limits achieve an overall emissions reduction from the existing VOC emission limits in §115.421(a) for metal furniture coatings and have been determined by the commission to be RACT. Subparagraph (B) contains two tables with the VOC limits for various metal furniture coating types. Table 1 in §115.453(a)(1)(A), presents the VOC content limits on a pound of VOC per gallon of coating basis, and Table 2 in §115.453(a)(1)(B), presents the equivalent VOC emission limits on a lb VOC/gal of solids basis. Although not recommended in the 2007 Metal Furniture Coatings CTG, proposed subparagraph (B) requires that if a coating does not meet a specific coating type definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.

The commission proposes new subparagraph (C) to specify the VOC limits that apply to the specified miscellaneous metal parts and products coating types. Proposed subparagraph (C) requires that if a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies. This proposed requirement is recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG. As discussed in the *Demonstrating Noninterference Under FCAA, Section 110(l)* portion of the Background and Summary of the Factual Basis for the Proposed Rules section of this preamble, the proposed VOC limits achieve an overall emissions reduction from the existing VOC emission limits in §115.421 for miscellaneous metal parts and products coatings and have been determined by the commission to be RACT. Subparagraph (C) contains two tables with the VOC limits for various miscellaneous metal parts and products. Table 1 in §115.453(a)(1)(C), presents the VOC content limits on a lb VOC/gal of coating basis; and Table 2, also located in §115.453(a)(1)(C), presents the equivalent VOC emission limits on a lb VOC/gal of solids basis.

The commission proposes new subparagraph (D) to specify the VOC limits that apply to the specified miscellaneous plastic parts and products coatings. Proposed new subparagraph (D) requires that if a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating, and the VOC limit for general coating applies. This proposed requirement is recommended in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG. Subparagraph (D) contains two tables with coating VOC limits for various miscellaneous plastic parts and products. Table 1 in §115.453(a)(1)(D), presents the VOC content limits on a lb VOC/gal of coating basis; and Table 2, also located in §115.453(a)(1)(D), presents the equivalent VOC emission limits on a lb VOC/gal of solids basis.

The commission proposes new subparagraph (E) to specify the VOC limits that apply to the specified automotive/transportation and business machine plastic parts coatings. The EPA's CTG recommends that for all miscellaneous metal and plastic part coating categories, if a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies. However, the automotive/transportation and business machine plastic parts coatings category does not have a *general* or *other* coating category; the requirement is therefore not proposed to apply to this particular miscellaneous metal and plastic coating category. Subparagraph (E) contains two tables with coating VOC limits for various automotive/transportation and business machine plastic parts coatings types. Table 1 in §115.453(a)(1)(E), presents the VOC content limits for automotive/transportation plastic parts coatings on a lb VOC/gal of coating basis and a lb VOC/gal of solids basis. Table 2, also located in §115.453(a)(1)(E), presents the VOC content limits for business machine plastic parts coatings on a lb VOC/gal of coating basis and a lb VOC/gal of solids basis.

The commission proposes new subparagraph (F) to provide the VOC limits that apply to the specified pleasure craft coatings. Proposed new subparagraph (F) requires that if a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating and the VOC limit for other pleasure coatings applies. Such a coating would be classified under the *all other pleasure craft surface coatings for metal or plastic* or *other substrate antifoulant coating*. Subparagraph (F) contains two tables with coating VOC limits for various pleasure craft coatings types. Table 1 in §115.453(a)(1)(F) presents the VOC content limits on a lb VOC/gal of coating basis; and Table 2, also located in §115.453(a)(1)(F), presents the equivalent VOC emission limits on a lb VOC/gal of solids basis.

Proposed new paragraph (2) requires that the owner or operator shall not apply motor vehicle materials to the metal and plastic parts in subsection (a)(1)(C) - (F), that exceed the limits (minus water and exempt compounds) contained in the table in §115.453(a)(2), as delivered to the application system, for various motor vehicle materials. The VOC limits for motor vehicle materials are proposed only on a lb VOC/gal of coating ba-

sis because the Miscellaneous Metal and Plastic Parts Coatings CTG document expects these are low-use materials and are often used in areas of operation that would be expensive to control with add-on controls. The commission requests comment on whether the option to use a vapor control system during application of motor vehicle materials should be provided as a compliance option.

Proposed new paragraph (3) requires that the owner or operator of an automobile and light-duty truck assembly coating process shall not apply coatings that exceed the VOC limits contained in the two tables in §115.453(a)(3). Table 1 in §115.453(a)(3) presents the VOC limits for each automobile and light-duty truck coating process. The limits vary depending on the process. The commission proposes to implement the EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG recommendation to base the VOC limits for electrodeposition primer coatings on a monthly weighted average instead of the daily weighted average required in the existing Chapter 115 rules. Compliance with the VOC limits on a monthly weighted average basis must be determined in accordance with the procedure in §115.455(a)(2)(D). Additionally, the commission proposes to provide as an alternative to the VOC limit of 4.8 lbs VOC/gal of coating applied for final repair, if a source owner or operator does not compile records sufficient to enable determination of a daily weighted average VOC content, compliance with the final repair VOC limit may be demonstrated each day by meeting a standard of 4.8 lbs VOC/gal of coating (minus water and exempt solvents) on an occurrence-weighted average basis. Compliance with the VOC limits on an occurrence-weighted average basis must be determined in accordance with the procedure specified in §115.455(a)(2). Table 2 in §115.453(a)(3) presents the VOC content limits for miscellaneous materials used during automobile and light-duty truck manufacturing coating. Compliance with the VOC content limits must be determined in accordance with §115.455(a)(1) or (2)(C), as appropriate.

Proposed new paragraph (4) requires that the owner or operator of each paper, film, and foil coating line shall not apply coatings that exceed the limits contained in the table in §115.453(a)(4). Proposed new paragraph (4) requires the limits must be met by applying low-VOC coatings to meet the specified VOC content limits on a pound of VOC per pound of coating basis as delivered to the application system or by applying low-VOC coatings in combination with a vapor control system to meet the specified VOC emission limits on a pound of VOC per pound of solids basis. The table in §115.453(a)(4) provides separate VOC limits for pressure sensitive tape and label surface coating and paper, film, and foil surface coating.

The commission proposes new paragraph (5) to require an affected owner or operator choosing to comply with the option to apply low-VOC coatings in combination with a vapor control system to meet the VOC emission limits in subsection (a)(1) or (4), to use the equation provided. This proposed new control requirement is necessary to demonstrate that the overall control efficiency of the vapor control system, when used in conjunction with low-VOC coatings, is sufficient to meet the VOC emission limits in §115.453(a)(1) and (4). Proposed new paragraph (5) contains the equation to determine the overall control efficiency needed to meet the VOC emission limits in §115.453. The equation proposed in new paragraph (5) is the same as the equation in existing §115.423(3)(A), revised to ensure the equation applies to either volume-based or mass-based units. Proposed new paragraph (5) also requires control device and capture efficiency testing to be performed in accordance with the testing requirements in §115.455(a)(3) and (4). The commission seeks comment on alternative methods for demonstrating compliance with the option to apply low-VOC coatings in combination with a vapor control system.

Proposed new subsection (b) provides that except for the surface coating process in subsection (a)(2), the owner or operator of a surface coating process may operate a vapor control system capable of achieving a 90% overall control efficiency, as an alternative to subsection (a). The Automobile and Light-Duty Truck Assembly Coatings CTG did not recommend using a vapor control system as an alternative compliance option. However, to maintain flexibility, the commission proposes to provide the owner or operator of an automobile and light-duty truck assembly coating process the option to comply with the 90% overall control efficiency compliance option recommended in the EPA's CTG documents regarding the other coating processes affected by the proposed rulemaking. The commission also proposes to omit the calculation to determine the minimum overall control efficiency contained in existing §115.423(3)(A), from the proposed rulemaking. The commission seeks comment on whether the 90% overall control efficiency is an appropriate alternative compliance option for the automobile and light-duty truck manufacturing coating industry. Proposed new subsection (b) requires control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.455(a)(3) and (4). Additionally, proposed new subsection (b) indicates that if the owner or operator complies with the overall control efficiency option under this subsection, then the owner or operator is exempt from the application system requirements of subsection (c) to clarify that the owner or operator choosing this control option would not have to limit the VOC content of coating materials and would not need to use any particular coating application system to demonstrate compliance with the proposed control requirements. The language in proposed new subsection (b) also does not include the provision in §115.423(3)(B) that requires the owner or operator to submit design data for each capture system and control device to the executive director for approval. Facilities that elect the use of this option and install additional control equipment would be required to meet permitting requirements for the installation and including a separate provision for executive director approval is unnecessary.

The commission proposes new subsection (c) to ensure that the owner or operator of any surface coating process subject to this division does not apply coatings unless one of the listed coating application systems is used. Except for the automobile and light-duty truck assembly coating and paper, film, and foil coating categories, the proposed application systems are intended for use in coating processes choosing to comply with the control options requiring low-VOC coatings in subsection (a). If an operation qualifies for exemption from the VOC content limits, the coating application system requirements are still applicable to that operations unless specifically exempt from this subsection or if operating a vapor control system. The allowable application systems are listed in proposed new paragraphs (1) - (7) and include: electrostatic application; high-volume, low-pressure spray (HVLP); flow coat; roller coat; dip coat; brush coating; and other coating application system capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spray. Proposed new paragraph (7) states that for the purpose of this requirement, the transfer efficiency of HVLP spray is assumed to be 65%.

Proposed new subsection (d) requires the owner or operator of a surface coating process subject to the division to implement work

practice procedures in paragraphs (1) and (2). The proposed new work practices are recommendations provided in the CTG documents concerning the coating categories affected by this division.

Proposed new paragraph (1) requires that for all coating-related activities, including but not limited to, solvent storage, mixing operations, and handling operations for coatings and coating-related waste materials, the owner or operators of all surface coating processes listed in §115.450(a), except where specifically exempt, must implement the work practices in subparagraphs (A) - (E). Proposed new paragraph (1) also requires additional work practices for automobile and light-duty truck assembly coating. Proposed subparagraph (A) requires storage of all VOC-containing coatings and coating-related waste in closed containers. Proposed new subparagraph (B) requires minimization of spills of VOC-containing coatings. Proposed new subparagraph (C) requires conveying all coatings in closed containers or pipes. Proposed new subparagraph (D) requires closing mixing vessels that contain VOC-containing coatings and other materials except when specifically in use. Proposed new subparagraph (E) requires cleaning up spills immediately. Although the Large Appliance Coatings CTG is the only document that recommends the work practice specified in subparagraph (E), the commission proposes to expand the requirement to apply to the other surface coating processes subject to this division because the commission expects that most sites are probably voluntarily following this work practice for safety reasons. The commission seeks comment on any instance where complying with the work practice in proposed new subparagraph (E) would not be feasible for surface coating processes subject to this division other than large appliance coating. Proposed new subparagraph (F) requires that in addition, the owner or operator of an automobile and light-duty truck assembly coating process minimize VOC emissions from the cleaning of storage, mixing, and conveying equipment. Proposed new subparagraph (F) only applies to automobile and light-duty truck assembly coating processes because this work practice is unique to the recommendations in the corresponding CTG document.

Proposed new paragraph (2) requires that for all cleaning-related activities including, but not limited to, waste, storage, mixing, and handling operations for cleaning materials, the owner or operator must implement the work practice procedures in subparagraphs (A) - (E). Proposed new paragraph (2) requires that in addition, the owner or operator of metal parts and products coating processes listed in §115.450(a)(3) - (5), implement the work practice in subparagraph (F). Proposed subparagraph (A) requires storage of all cleaning materials and shop towels in closed containers. Proposed new subparagraph (B) requires that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials. Proposed new subparagraph (C) requires minimization of spills of VOC-containing cleaning materials. Proposed new subparagraph (D) requires conveying VOC-containing cleaning materials from one location to another in closed containers or pipes. Proposed new subparagraph (E) requires minimization of VOC emissions from cleaning of storage, mixing, and conveying equipment. Proposed new subparagraph (F) requires cleaning up spills immediately. In addition, proposed new subparagraph (G) requires the owner or operator to minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent, and all spent solvent is captured in closed containers. Proposed new subparagraph (G) only applies to metal and plastic parts surface coating processes listed in §115.453(a)(1)(C) - (F) and (2), because this work practice is unique to the recommendations in the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG document. The proposed work practice procedures in this paragraph would apply to any cleaning material involved in operations such as the surface preparation of a substrate and post-operation cleaning of equipment and work areas.

Proposed new paragraph (3) directs the owner or operator of an automobile and light-duty truck assembly coating operation to implement a work practice plan containing procedures to minimize VOC emissions from cleaning activities and purging of coating application equipment. Proposed new paragraph (3) allows properties with a work practice plan already in place to comply with National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements specified in 40 CFR §63.3094 (as amended through April 20, 2006 (71 FR 20464)), to incorporate procedures for minimizing non-hazardous air pollutant VOC emissions to comply with the work practice plan required by this paragraph. The commission requests comment on appropriate cleaning work practices related to automobile and light-duty truck manufacturing.

Proposed new subsection (e) specifies that a coating operation that becomes subject to the provisions of §115.453(a) by exceeding the provisions of §115.451(a) is subject to the provisions in §115.453(a) even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with §115.453(a) and one of the conditions in paragraphs (1) or (2) is met. This is an existing requirement in §115.422 and the commission is proposing to include the same requirement in Division 5. Proposed new paragraph (1) specifies that the project that caused throughput or emission rate to fall below the exemption limits in §115.451(a) must be authorized by any permit, permit amendment, standard permit, or permit by rule required by Chapters 106 or 116. Proposed new paragraph (1) also requires that if a permit by rule is available for the project, compliance with §115.451(a) must be maintained for 30 days after the filing of documentation of compliance with that permit by rule. Proposed new paragraph (2) specifies that if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

Section 115.454, Alternate Control Requirements

Proposed new §115.454, provides that for the owner or operator of a surface coating process subject to this division, 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 if emission reductions are demonstrated to be substantially equivalent. This option is not a recommendation in any of the CTG documents applicable to this division but is consistent with other Chapter 115 rules.

Proposed new subsection (b) specifies that for any surface coating process or processes at a specific property, the executive director may approve requirements different from those in §115.453(a)(1)(C) based upon the executive director's determination that such requirements will result in the lowest emission rate that is technologically and economically reasonable. The proposed new subsection specifies that when making such a determination, the executive director shall specify the date or dates by which such different requirements shall be met and

shall specify any requirements to be met in the interim. The proposed new subsection also specifies that if the emissions resulting from such different requirements equal or exceed 25 tpy for a property, the determinations for that property shall be reviewed every five years. Additionally, the proposed new subsection states that executive director approval does not necessarily constitute satisfaction of all federal requirements nor eliminate the need for approval by the EPA in cases where specified criteria for determining equivalency have not been clearly identified in applicable sections of this chapter. Proposed new subsection (b) incorporates the alternate control requirement in existing §115.423(4) with non-substantive changes to update the section referenced.

Section 115.455, Approved Test Methods and Testing Requirements

Proposed new §115.455, identifies the test methods approved to determine compliance with the proposed coating VOC limits and specifies the capture efficiency testing requirements for owners and operators choosing to operate a vapor control system to comply with the proposed rule requirements.

Proposed new subsection (a) identifies the approved test methods and testing requirements and requires that compliance with the requirements in this division must be determined by applying the test methods, as appropriate. Additionally, proposed new subsection (a) provides as an alternative to the test methods in paragraph (1), the VOC content of coatings may be determined by using analytical data from the coating, and if necessary the dilution solvent, MSDS. The Miscellaneous Metal and Plastic Parts Coatings and Automobile and Light-Duty Truck Assembly Coatings CTG documents recommend accepting data from the MSDS as a compliance alternative to testing. However, the commission expects that relying on the MSDS is sufficient to ensure continuous compliance with the control requirements in §115.453 and is proposing the option to use the MSDS for all of the surface coating process categories subject to this division. Unless specifically discussed, the proposed test methods in this subsection are identical to the testing procedures required in existing §115.425.

Proposed new paragraph (1) specifies that the owner or operator shall demonstrate compliance with the VOC limits in §115.453 by applying the test methods in paragraphs (1) and (2), as appropriate. The EPA's Miscellaneous Metal and Plastic Parts Coatings and Automobile and Light-Duty Truck Assembly Coatings CTG documents provide specific testing recommendations that are proposed for inclusion in this section. The commission proposes to allow owners and operators of these surface coating processes to employ other test methods to avoid inadvertently eliminating a testing procedure in §115.425 that may currently be used to comply with the existing requirements §115.421(a). Proposed new paragraph (1) also allows the owner or operator to exclude exempt solvents from determining compliance with the applicable control requirements, when a test method inadvertently measures compounds that are exempt solvents. This provision is currently in §115.425 and is retained in the proposed rules with revision because compliance with the VOC content limits is based on the VOC concentration of a coating considering only the VOC and solids content.

The specific methods and procedures required are listed in subparagraphs (A) - (D) and include: Method 24 (40 CFR Part 60, Appendix A); American Society for Testing and Materials (ASTM) Test Methods D 1186-06.01, 1200-06.01, D 3794-06.01, D 1644-75, and D 3960-81; EPA guidelines series document "Procedures for Certifying Quantity of Volatile Organic Compounds (VOC) Emitted by Paint, Ink, and Other Coatings," EPA-450/3-84-019, as in effect December, 1984; and the additional test procedures described in 40 CFR §60.446 (as amended through October 17, 2000 (65 FR 61761)).

The commission also proposes new subparagraph (E) to allow minor modifications to the test methods specified in subparagraphs (A) - (D) if approved by the executive director.

The commission proposes new paragraph (2) to indicate that in addition to subsection (a)(1), the owner or operator shall determine compliance with the VOC limits in §115.453(a)(3) by applying the test methods in subparagraphs (A) - (C), as appropriate.

Proposed new subparagraph (A) specifies the Protocol for Determining the Daily VOC Emission Rate of Automobile and Light-Duty Truck Topcoat Operations (EPA-453/R-08-002).

Proposed new subparagraph (B) specifies the procedure contained in this paragraph for determining daily compliance with the alternative emission limitation in §115.453(a)(3) for final repair. Calculation of occurrence weighted average for each combination of repair coatings (primer, specific basecoat, clearcoat) must be determined by the procedure list in subparagraph (B)(i) - (iii).

Proposed new clause (i) provides that the relative occurrence weighted average usage is calculated using the equations in clause (i) for each repair material. Proposed new clause (i) is the combination of the requirements in existing §115.425(3)(B)(i) and (ii). The equations in §115.453(a)(2)(B)(i) are used to determine the occurrence weighted average of the primer, basecoat, and clearcoat used in repair operations. A description of each equation variable is provided with the equations. The EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG recommends giving clearcoat coatings a weighting factor of two and the other coatings a weighting factor of one. However, the commission proposes to retain the existing approach for determining the occurrence weighted average in §115.425(3)(B) because it adequately accounts for the varying usage between the different types of coatings used in repair operations.

Proposed new clause (ii) specifies that the occurrence weighted average (Q) in lb VOC/gal of coating (minus water and exempt solvents) as applied, for each potential combination of repair coatings is calculated according to subparagraph (B). Included in proposed new clause (ii) is the equation to determine the occurrence weighted average and descriptions of each equation variable, except for those that are defined in clause (i).

Proposed new subparagraph (C) lists the procedure contained in 40 CFR Part 63, Subpart PPPP, Appendix A (as amended through April 24, 2007 (72 FR 20237)), for reactive adhesives. Proposed new subparagraph (C) is a recommendation provided in the EPA's 2008 Automobile and Light-Duty Truck Assembly Coatings CTG document.

Proposed new subparagraph (D) lists the procedure contained in 40 CFR Part 60, Subpart MM (as amended October 17, 2000 (65 FR 61760)) for determining the monthly weighted average for electrodeposition primer.

Proposed new paragraph (3) lists the required methods used to determine compliance with the overall control efficiency option in proposed new §115.453(b). The methods listed in proposed new paragraph (3) are used to determine the destruction or removal efficiency of control devices, such as a thermal oxidizer, that are used to comply with §115.453(b). The methods listed in subpara-

graphs (A) - (D) include: Methods 1 - 4 (40 CFR Part 60, Appendix A) for determining flow rate; Method 25 (40 CFR Part 60, Appendix A) for determining total gaseous nonmethane organic emissions as carbon; Methods 25A or 25B (40 CFR Part 60, Appendix A) for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis; and the additional performance test procedures in 40 CFR §60.444 (as amended through October 17, 2000 (65 FR 61761)). Proposed new subparagraph (E) would allow the executive director to approve minor modifications to the methods in subparagraphs (A) - (D).

Proposed new paragraph (4) requires that the owner or operator of a coating process subject to §115.453(b) shall measure the capture efficiency using applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; and Procedure F.2 - Fugitive VOC Emissions from Building Enclosures.

Proposed new subparagraph (A) includes exemptions that may apply to capture efficiency testing requirements if the source meets the provisions in either clause (i) or (ii). The exemptions from capture efficiency testing provided in clauses (i) and (ii) are identical to the capture efficiency testing exemptions currently provided in the existing §115.425(a)(7)(A). Proposed new clause (i) provides an exemption for sources with a permanent total enclosure that meets the specifications of Procedure T, and all VOC is directed to a control device.

Proposed new clause (ii) provides an exemption if the source uses a control device designed to collect and recover VOC and the conditions in subclauses (I) and (II) are met.

Proposed new subparagraph (B) requires that the capture efficiency must be calculated using one of the following four protocols referenced. The proposed subparagraph additionally requires that any affected source must use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the EPA. The capture efficiency testing protocols included in proposed new subparagraph (B) are the same as those currently required in §115.425(a)(7)(B) except for non-substantive revisions and formatting to the equations to conform to current rule formatting standards.

Proposed new clause (i) lists the protocol for the gas/gas method using TTE. Additionally, the proposed clause requires the EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The equation required for the gas/gas method using a TTE is also provided in clause (i) with the definitions for the equation variables.

Proposed new clause (ii) lists the protocol for the liquid/gas method using TTE. Additionally, the proposed clause requires the EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The equation required for the liquid/gas method using a TTE is also provided in clause (ii) with the definitions for the equation variables.

Proposed new clause (iii) lists the protocol for the gas/gas method using the building or room enclosure in which the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The proposed clause requires that all fans and blowers in the building or room enclosure in which the affected source is located must be operating as they would under normal production. The equation required for the gas/gas method for using a building or room enclosure in which the affected source is located is also provided in clause (iii) with the definitions for the equation variables.

Proposed new clause (iv) lists the protocol for the liquid/gas method using a building or room enclosure in which the affected source is located in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The proposed clause requires that all fans and blowers in the building or room enclosure in which the affected source is located must be operated as they would under normal production. The equation required for the liquid/gas method for using a building or room enclosure in which the affected source is located is also provided in clause (iv) with the definitions for the equation variables.

Proposed new subparagraph (C) requires the operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.458(a) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. Proposed new subparagraph (C) indicates the executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test. Proposed new subparagraph (C) ensures the operational parameters tested in the initial performance test are representative of those during normal operation.

Proposed new paragraph (5) allows the owner or operator to use test methods other than those specified in paragraphs (1) - (3) if approved by the executive director and validated by 40 CFR Part 63, Appendix A, Method 301. Proposed new paragraph (5) also specifies that for purposes of this paragraph, substitute "executive director" each place that Method 301 references "administrator."

Proposed new subsection (b) specifies the inspection requirements. Proposed new subsection (b) requires that the owner or operator of each surface coating process subject to the control requirements in §115.453 shall provide samples, without charge, upon request by representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction. Proposed new subsection (b) specifies the representative or inspector requesting the sample will determine the amount of coating needed to test the sample to determine compliance. These inspection requirements are identical to those in existing §115.424 with reformatting changes.

Section 115.458, Monitoring and Recordkeeping Requirements

The commission proposes new §115.458, to identify the monitoring and recordkeeping sufficient to demonstrate compliance with the requirements in this division.

Proposed new subsection (a) indicates that the monitoring requirements in this subsection apply to the owner or operator of a surface coating process subject to this division that uses a vapor control system in accordance with §115.453(b). Proposed new subsection (a) requires that the owner or operator shall install and maintain monitors to accurately measure and record operational parameters of all required control devices, as necessary, to ensure the proper functioning of those devices in accordance with design specifications, including the requirements in subsection (a)(1) - (4). The proposed monitoring requirements in sub-

section (a) are identical to the existing requirements imposed in §115.426(2) with revisions to update language for consistency with language used throughout this division and other Chapter 115 rules.

Proposed new paragraph (1) requires continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed. Proposed new paragraph (2) requires the total amount of VOC recovered by carbon adsorption or other solvent recovery systems during a calendar month. Proposed new paragraph (3) requires continuous monitoring of carbon adsorption bed exhaust. Proposed new paragraph (4) requires appropriate operating parameters for capture systems and control devices other than those specified in subsection (a)(1) - (3).

Proposed new subsection (b) specifies that the recordkeeping requirements in this subsection apply to the owner or operator of a surface coating process subject to this division. Proposed new paragraph (1) requires the owner or operator to maintain records of the testing data or the MSDS, in accordance with the requirements in §115.455(a)(1). Proposed new paragraph (1) also requires that the MSDS must contain relevant information regarding each coating and solvent available for use in the affected surface coating processes including the VOC content, composition, solids content, and solvent density. Additionally, the proposed new paragraph requires that all records must be sufficient to demonstrate continuous compliance with the VOC limits in §115.453(a).

Proposed new paragraph (2) requires that records be maintained of the quantity and type of each coating and solvent consumed during the specified averaging period if any of the coatings, as delivered to the coating application system, exceed the applicable control limits. Such records must be sufficient to calculate the applicable weighted average of VOC content for all coatings. Proposed new paragraph (2) is the same as the existing requirement in §115.426(1)(B).

Proposed new paragraph (3) provides as an alternative to the recordkeeping requirements of paragraph (2), the owner or operator that qualifies for exemption under §115.451(1)(C) may maintain records of the total gallons of coating and solvent used in each month and total gallons of coating and solvent used in the previous 12 months. Proposed new paragraph (3) imposes the same requirement as in existing §115.426(1)(B)(3).

Proposed new paragraph (4) requires the owner or operator shall maintain, on file, the capture efficiency protocol submitted under §115.455(a)(4). All results of the test methods and capture efficiency protocols must be submitted to the executive director within 60 days of the actual test date. The owner or operator would also be required to maintain records of the capture efficiency operating parameter values on-site for a minimum of one year. If any changes are made to capture or control equipment, the owner or operator is required to notify the executive director in writing within 30 days of these changes and a new capture efficiency or control device destruction or removal efficiency test may be required.

Proposed new paragraph (5) requires that the owner or operator claiming an exemption in §115.451 shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria. Proposed new paragraph (6) indicates that except for specialty coatings, compliance with the recordkeeping requirements of 40 CFR §63.752 (as amended through September 1, 1998 (63 FR 46534)), is considered to represent compliance with the requirements of this section.

Proposed new paragraph (7) requires that records must be maintained of any testing conducted in accordance with the provisions specified in §115.455(a). Proposed new paragraph (8) requires that records must be maintained a minimum of two years and be made available upon request to authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction.

Section 115.459, Compliance Schedules

The commission proposes new §115.459, to list the compliance schedule for affected surface coating processes in the DFW and HGB areas subject to Division 5. Proposed new subsection (a) requires that the owner or operator of a surface coating process subject to this division shall comply with the requirements of this division no later than March 1, 2013. The March 1, 2013, compliance date provides affected owners and operators approximately a year and a half to make any necessary changes and ensures that any VOC reductions achieved by the proposed rule will occur prior to the ozone season in the DFW area. The commission is requesting comment on appropriate compliance dates for the proposed new requirements.

Proposed new subsection (b) requires that the owner or operator of each surface coating process that becomes subject to this division on or after the date specified in §115.459(a), shall comply with the requirements in this division no later than 60 days after becoming subject. The commission requests comment on the amount of time adequate to comply with the requirements in this division for surface coating processes that become subject after the March 1, 2013, compliance date.

SUBCHAPTER E, SOLVENT-USING PROCESSES

DIVISION 6, INDUSTRIAL CLEANING SOLVENTS

Section 115.460, Applicability and Definitions

The commission proposes new §115.460, to identify the operations affected by the proposed rule requirements and to define the terms relevant to those affected operations.

The commission proposes new subsection (a) to indicate the requirements in this division apply to the owner or operator of solvent cleaning operations in the DFW and HGB areas beginning March 1, 2013. Proposed new subsection (a) states that residential cleaning is not considered a solvent cleaning operation. The commission proposes to exclude residential cleaning because these operations are outside the scope of sources intended to be affected by the EPA's 2006 CTG. Unless specifically exempt in §115.461, the proposed cleaning rule requirements in this division are intended to apply to sites where cleaning requirements in the Chapter 115 rules specific to a regulated process or operation are absent, and to industrial processes or operations that are not specifically regulated in Chapter 115.

Proposed new subsection (b) indicates that unless the context clearly indicates otherwise or unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10, the terms used in this division have the meanings commonly used in the field of air pollution control. Proposed new subsection (b) also lists the specific definitions that apply in the proposed new Division 6. Unless specifically discussed, the terms defined in this subsection are based on those in the Bay Area Air Quality Management District's Regulation 8 Rules and South Coast Air Quality Manage-

ment District's Regulation XI, Rule 1171. The EPA's 2006 Industrial Cleaning Solvents CTG did not recommend any definitions but relied on both Management District's rules for the development of its exemption and control recommendations. The commission solicits comment on definitions that should be included in the proposed new subsection.

The terms defined in proposed new paragraphs (1) - (10) include: *aerosol can; electrical and electronic components; janitorial cleaning; magnet wire; magnet wire coating operation; medical device; medical device and pharmaceutical preparation operations; polyester resin operation; precision optics;* and *solvent cleaning operation.*

Proposed new paragraph (3) defines *Janitorial cleaning* as the cleaning of building or building components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, bathrooms, furnishings, and exterior surfaces of office equipment, and excludes the cleaning of work areas where manufacturing or repair activity is performed. The proposed definition is derived from the South Coast Air Quality Management District's Regulation XI, Rule 1171 janitorial cleaning definition with revision to replace the term *facility* with *building* for clarification. The EPA's 2006 Industrial Cleaning Solvents CTG recommends janitorial cleaning be excluded from the applicability for the proposed rule requirements.

The definition of *solvent cleaning operation* in proposed new paragraph (10) is the removal of uncured adhesives, inks, and coatings; and contaminants such as dirt, soil, oil, and grease from parts, products, tools, machinery, equipment, vessels, floors, walls, and other work production related work areas. The proposed definition is based on the EPA's 2006 CTG description of cleaning operations.

Section 115.461, Exemptions

The commission proposes new §115.461, to list the proposed new exemptions recommended in EPA's 2006 Industrial Cleaning Solvents CTG. Proposed new §115.461 establishes consistency with other Chapter 115 rules and makes the rule easier to read by clearly identifying the cleaning activities that are exempt from all or portions of the subsequent rule requirements. The commission seeks comment on appropriate exemptions for solvent cleaning operations in the DFW and HGB areas.

Proposed new subsection (a) exempts the owner or operator of solvent cleaning operations located on a property that emits less than 3.0 tons per calendar year of VOC from all cleaning solvents, when uncontrolled, from the requirements in this division, except as specified in §115.468(b)(2). The commission agrees with the EPA's determination that requiring these small sources to comply with the control requirements in §115.463 is not economically feasible and does not constitute RACT. When determining if a source qualifies for this exemption or any other exemption that refers to uncontrolled VOC emissions, the combined VOC emissions would be calculated without considering the emission reductions achieved through the use of any add-on controls or other operational changes.

Proposed new subsection (b) exempts any process or operation subject to Chapter 115 where the rule specifies solvent cleaning requirements related to that process or operation. Proposed new subsection (b) ensures that owners and operators of affected processes or operations regulated in Chapter 115 would only be subject to one set of cleaning requirements. Examples of operations exempt from all requirements in this division because other Chapter 115 rules regulate cleaning activities include degreasing, offset lithographic printing, and miscellaneous metal and plastic parts coating processes.

Proposed new subsection (c) exempts the products and operations listed in paragraphs (1) - (17) from the VOC limits in §115.463(1). The EPA's 2006 Industrial Cleaning Solvents CTG relies on the Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 4, Sections 8-4-116 and 8-4-117 for its recommended exemptions. The products and operations exempt under these sections would not be subject to the 50 grams per liter (g/l) VOC content limit even if subject to Rule 4 through an exemption in another BAAQMD Rule under Regulation 8. Under the commission's interpretation of the exemptions provided in the BAAQMD Regulation 8, Rule 4, it is presumed that there are technological feasibility issues with meeting the 50 g/l or equivalent cleaning standards and should not be applied to the products and operations specified in BAAQMD Regulation 8, Rule 4, Sections 8-4-116 and 8-4-117.

The products and operations exempted under proposed new paragraphs (1) - (17) include: electrical and electronic components; precision optics; numisimatic dies; resin mixing, molding, and application equipment; coating, ink, and adhesive mixing, molding, and application equipment; stripping of cured inks, cured adhesives, and cured coatings; research and development laboratories; medical device or pharmaceutical preparation operations; performance or quality assurance testing of coatings, inks, or adhesives; architectural coating manufacturing and application operations; magnet wire coating operations; semiconductor wafer fabrication; coating, ink, and adhesive manufacturing; polyester resin operations; flexographic and rotogravure printing processes; screen printing operations; and digital printing operations.

The commission proposes new subsection (d) to exempt cleaning solvents supplied in aerosol cans from the VOC limits in §115.463(3) if total use for the property is less than 160 fluid ounces per day. Proposed new subsection (d) incorporates the exemption in the South Coast Air Quality Management District Regulation XI, Rule 1171, Section (g)(4). The exemption will allow sites to use higher VOC content cleaning solvents in aerosol cans in limited quantities if necessary for situations that low-VOC cleaning solvents may not be as effective.

Section 115.463, Control Requirements

The commission proposes new §115.463, to implement the EPA's 2006 Industrial Cleaning Solvents recommendations for affected cleaning solvent operations in the DFW and HGB areas that the commission has determined to be RACT, unless specifically discussed in this preamble. Proposed new §115.463 specifies that the control requirements in paragraphs (1) - (4) apply to the owner or operator of a solvent cleaning operation subject to this division.

Proposed new paragraph (1) requires that the owner or operator shall limit the VOC content of cleaning solutions to either the limit in paragraph (1)(A) or (B). Various compliance options are provided to give affected owners or operators the flexibility to choose the appropriate option for the solvent cleaning operations performed at their site. Proposed new subparagraph (A) limits the VOC content to 0.42 lb VOC/gal of solution, as applied. Proposed new subparagraph (B) limits the composite partial vapor pressure of the cleaning solution to 8.0 millimeters of mercury at 68 degrees Fahrenheit (20 degrees Celsius).

Proposed new paragraph (2) provides an alternative to paragraph (1) by allowing the owner or operator to operate a vapor

control system capable of achieving an overall control efficiency of at least 85% by mass. Proposed new paragraph (2) requires that capture efficiency testing must be performed in accordance with the testing requirements in §115.465. The 85% overall control efficiency is the control level recommended by the CTG as an alternative to meeting the VOC content limits.

Proposed new paragraph (3) specifies the work practice procedures the owner or operator shall implement during the handling, storage, and disposal of cleaning solvents and shop towels. Proposed new subparagraph (A) requires covering open containers and used applicators. Proposed new subparagraph (B) requires minimizing air circulation around solvent cleaning operations. Proposed new subparagraph (C) requires properly disposing of used solvent and shop towels. Proposed subparagraph (D) requires implementing equipment practices that minimize VOC emissions (e.g., maintaining cleaning equipment to repair solvent leaks).

Proposed new paragraph (4) specifies that a solvent cleaning operation that becomes subject to the provisions of paragraph (1) by exceeding the exemption limits in §115.461 is subject to the provisions in paragraph (1) even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with paragraph (1) and one of the conditions in subparagraphs (A) or (B) is met. The provision in proposed new paragraph (4) is similar to an existing provision in §115.422(6), and the commission is proposing to include this requirement in the control requirements of the proposed new rule for industrial cleaning solvents. Proposed new subparagraph (A) requires the project that caused throughput or emission rate to fall below the exemption limits in §115.461 to be authorized by any permit, permit amendment, standard permit, or permit by rule required by Chapters 106 or 116. If a permit by rule is available for the project, compliance with paragraph (1) must be maintained for 30 days after the filing of documentation of compliance with that permit by rule. Proposed new subparagraph (B) requires that if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

Section 115.464, Alternate Control Requirements

The commission proposes new §115.464, to provide the owner or operator of a solvent cleaning operation subject to this division, 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 if emission reductions are demonstrated to be substantially equivalent. This option is not a recommendation in the EPA's 2006 Industrial Cleaning Solvents CTG but is consistent with the flexibility afforded to owners and operators regulated under other Chapter 115 rules.

Section 115.465, Approved Test Methods and Testing Requirements

The commission proposes new §115.467, to specify the methods and testing requirements that the owner or operator shall use to demonstrate compliance with the control requirements in §115.463.

Proposed new paragraph (1) requires that compliance with the VOC content limits in §115.463(1) must be determined using Method 24 (40 CFR Part 60, Appendix A). The proposed new paragraph provides as an alternative to Method 24, compliance with the VOC content limits in §115.463(1) may be determined by using analytical data from the MSDS. Proposed new paragraph (1) provides owners and operators the same flexibility afforded to other sites affected by Chapter 115, to either demonstrate compliance with the VOC content limits by employing Method 24 or by satisfying compliance through reliance on the MSDS. Although the EPA's 2006 CTG does not recommend specific test methods to determine the VOC content of cleaning solutions, the commission proposes to include Method 24 in the required procedures to address situations where MSDS information may not be available and provide additional flexibility for affected owners or operators. However, the commission could not identify appropriate methods to test for the vapor pressure of cleaning solutions as an alternative to relying on the MSDS. The commission requests comment on appropriate test methods to determine the VOC content or vapor pressure of cleaning solutions used during solvent cleaning operations and whether the alternate control requirement in proposed new §115.463(1)(B) should be limited to those cleaning solutions where the owner or operator has documented data from the manufacturer of the partial vapor pressure of the cleaning solution.

Proposed new paragraph (2) requires that the owner or operator subject to §115.463(2) shall measure the capture efficiency using applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; and Procedure F.2 - Fugitive VOC Emissions from Building Enclosures.

Proposed new subparagraph (A) provides two exemptions in clauses (i) and (ii) that may apply to capture efficiency testing requirements. The exemptions from capture efficiency testing provided in clauses (i) and (ii) are identical to the capture efficiency testing exemptions currently provided in the existing §115.425(a)(7)(A) and proposed to be included in the proposed new §115.455. Proposed new clause (i) provides an exemption for sources with permanent total enclosure that meets the specifications of Procedure T, and all VOC is directed to a control device. Proposed new clause (ii) provides an exemption if the source uses a control device designed to collect and recover VOC and the conditions in subclauses (I) and (II) are met.

Proposed new subparagraph (B) requires that the capture efficiency must be calculated using one of the four protocols referenced in clauses (i) - (iv). The proposed subparagraph additionally requires that any affected source must use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the EPA. The capture efficiency testing protocols included in proposed new subparagraph (B) are the same as those currently required in §115.425(a)(7)(B) in the current Chapter 115 rules for surface coating process, except for non-substantive revisions and formatting to the equations to conform to current rule formatting standards.

Proposed new clause (i) lists the protocol for the gas/gas method using a TTE. Additionally, the proposed clause requires the EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The equation required for the gas/gas method using a TTE is also provided in clause (i) with the definitions for the equation variables.

Proposed new clause (ii) lists the protocol for the liquid/gas method using TTE. Additionally, the proposed clause requires the EPA specifications to determine whether a temporary enclo-

sure is considered a TTE are given in Procedure T. The equation required for the liquid/gas method using a TTE is also provided in clause (ii) with the definitions for the equation variables.

Proposed new clause (iii) lists the protocol for the gas/gas method using the building or room enclosure in which the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The proposed clause requires that all fans and blowers in the building or room enclosure in which the affected source is located must be operating as they would under normal production. The equation required for the gas/gas method using a building or room enclosure in which the affected source is located is also provided in clause (iii) with the definitions for the equation variables.

Proposed new clause (iv) lists the protocol for the liquid/gas method using a building or room enclosure in which the affected source is located in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The proposed clause requires that all fans and blowers in the building or room enclosure in which the affected source is located must be operated as they would under normal production. The equation required for the liquid/gas method using a building or room enclosure in which the affected source is located is also provided in clause (iv) with the definitions for the equation variables.

Proposed new subparagraph (C) requires the operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.468(a) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. Proposed new subparagraph (C) indicates the executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test. Proposed new subparagraph (C) ensures the operational parameters tested in the initial performance test are representative of those during normal operation.

Proposed new paragraph (3) lists the required methods used to determine compliance with the overall control efficiency option in proposed new §115.463(2). The methods listed in proposed new paragraph (3) are used to determine the destruction or removal efficiency of control devices, such as a thermal oxidizer, that are used to comply with §115.463(2). The methods listed in subparagraphs (A) - (D) include: Method 1 - 4 (40 CFR Part 60, Appendix A) for determining flow rate; Method 25 (40 CFR Part 60 Appendix A) for determining total gaseous nonmethane organic emissions as carbon; Methods 25A or 25B (40 CFR Part 60, Appendix A) for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis; and the additional performance test procedures in 40 CFR §60.444 (as amended through October 17, 2000 (65 FR 61761)). Proposed new subparagraph (E) would allow the executive director to approve minor modifications to the methods in subparagraphs (A) - (D).

Proposed new paragraph (4) allows test methods other than those specified in paragraphs (1) - (3) if approved by the executive director and validated by 40 CFR Part 63, Appendix A, Method 301. Proposed new paragraph (4) also specifies that for purposes of this paragraph, substitute "executive director" each place that Method 301 references "administrator."

Section 115.468, Monitoring and Recordkeeping Requirements

The commission proposes new §115.468, to identify the monitoring and recordkeeping sufficient to demonstrate compliance with the requirements in this division.

Proposed new subsection (a) specifies that the monitoring requirements in this subsection apply to the owner or operator of solvent cleaning operations subject to this division that uses a vapor control system in accordance with §115.463(2). Proposed new subsection (a) requires that the owner or operator shall permanently install and maintain monitors to accurately measure and record operational parameters of all required control devices, as necessary, to ensure the proper functioning of those devices in accordance with design specifications, including the requirements in paragraphs (1) - (4). The monitoring requirements are not recommendations contained in the EPA's 2006 CTG document; these requirements are consistent with other Chapter 115 rules for control device monitoring.

Proposed new paragraph (1) requires continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed. Proposed new paragraph (2) requires the total amount of VOC recovered by carbon adsorption or other solvent recovery systems during a calendar month. Proposed new paragraph (3) requires continuous monitoring of carbon adsorption bed exhaust. Proposed new paragraph (4) requires appropriate operating parameters for vapor control systems other than those specified in subsection (a)(1) - (3).

Proposed new subsection (b) specifies that the recordkeeping requirements in this subsection apply to the owner or operator of solvent cleaning operations subject to this division.

Proposed new paragraph (1) requires that the owner or operator maintain records of the testing data or the MSDS, in accordance with the requirements in §115.465(1). Proposed new paragraph (1) requires that the concentration of all VOC used to prepare the cleaning solution and, if diluted prior to use, the proportions that each of these materials is used must be recorded. Proposed new paragraph (1) also requires records must be sufficient to demonstrate continuous compliance with the cleaning solution VOC content or composite partial vapor pressure limits in §115.463(1).

Proposed new paragraph (2) requires that the owner or operator of a solvent cleaning operation claiming an exemption in §115.461 shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria. For example, maintaining records of solvent usage may be sufficient to demonstrate continuous compliance with the exemption in §115.461(a).

Proposed new paragraph (3) requires that the owner or operator maintain records of any testing conducted at an affected site in accordance with the provisions specified in §115.465(2).

Proposed new paragraph (4) requires that records must be maintained a minimum of two years and be made available upon request to authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction. The proposed record retention period is consistent with other Chapter 115 rules. The commission seeks comment on the amount of time adequate to maintain records.

Section 115.469, Compliance Schedules

The commission proposes new §115.469, to list the compliance schedule for affected solvent cleaning operations in the DFW and HGB nonattainment areas subject to this division.

The commission proposes new subsection (a) requiring the owner or operator of a solvent cleaning operation subject to this division to comply with the requirements in this division no later than March 1, 2013. The March 1, 2013, compliance date provides affected owners and operators approximately a year and a half to make any necessary changes and ensures that any VOC reductions achieved by the proposed rule will occur prior to the ozone season in the DFW area. The commission requests comment on appropriate compliance dates for the rule requirements.

The commission also proposes new subsection (b) to require the owner or operator of a solvent cleaning operation that becomes subject to the division on or after March 1, 2013, to comply with the requirements in the division no later than 60 days after becoming subject. The commission requests comment on the amount of time adequate to comply with the requirements in the division for surface coating processes that become subject after the March 1, 2013, compliance date.

SUBCHAPTER E, SOLVENT-USING PROCESSES

DIVISION 7, MISCELLANEOUS INDUSTRIAL ADHESIVES

Section 115.470, Applicability and Definitions

The commission proposes new §115.470, to clearly identify the sites affected by the proposed rule requirements and to define the terms relevant to the materials used by and processes conducted at those affected sites.

The commission proposes new subsection (a) to indicate the requirements in the division apply to the owner or operator of a manufacturing or repair site using adhesives for any adhesive application process in the DFW and HGB areas beginning March 1, 2013.

Proposed new subsection (b) indicates that unless the context clearly indicates otherwise or unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10, the terms used in this division have the meanings commonly used in the field of air pollution control. Proposed new subsection (b) also lists the specific definitions that apply in the proposed new Division 7. The commission seeks comment on any additional definitions that should be included. Unless specifically discussed, the proposed definitions incorporate the EPA's 2008 CTG definition recommendations.

The definitions included in proposed new paragraphs (1) - (43) include: *Acrylonitrile-butadiene-styrene or ABS welding; Adhesive; Adhesive primer; Aerosol adhesive or adhesive primer; Application system; Ceramic tile installation adhesive; Chlorinated polyvinyl chloride plastic or CPVC plastic welding; Chlorinated polyvinyl chloride welding or CPVC welding; Contact adhesive; Cove base; Cove base installation adhesive; Cyanoacrylate adhesive; Daily weighted average; Ethylene Propylenediene Monomer (EPDM) roof membrane; Flexible vinyl; Indoor floor covering installation adhesive; Laminate; Metal to urethane/rubber molding or casting adhesive; Motor vehicle adhesive; Motor vehicle glass-bonding primer; Motor vehicle weatherstrip adhesive; Multipurpose construction adhesive; Outdoor floor covering installation adhesive; Panel installation; Perimeter bonded sheet flooring installation; Plastic solvent welding adhesive; Plastic solvent welding adhesive primer; Plastic foam; Plastics; Polyvinyl chloride plastic or PVC plastic; Polyvinyl chloride welding adhesive or PVC welding adhesive; Porous material; Reinforced plastic composite; Rubber; Sheet rubber lining installation; Single-ply roof membrane; Single-ply roof membrane installation and repair adhesive; Single-ply roof membrane adhesive primer; Structural glazing; Subfloor installation; Thin metal laminating adhesive; Tire repair;* and *Waterproof resorcinol glue.*

The definition of *Application system* in proposed new paragraph (5) is devices or equipment designed for the purpose of applying an adhesive or adhesive primer to a surface and is based on the existing definition of *coating application system* in §115.420(a)(3). Proposed new paragraph (5) indicates the devices may include, but are not be limited to, brushes, sprayers, flow coaters, dip tanks, rollers, and extrusion coaters. Proposed new paragraph (5) retains the definition in §115.420(a)(3) with changes to remove the application systems that would not be used to apply adhesive processes.

The definition of *Daily weighted average* in proposed new paragraph (13) is the total weight of VOC emissions from all adhesives and adhesive primers subject to the same VOC content limit in §115.473(a), divided by the total volume of those adhesives or adhesive primers (minus water and exempt solvent) delivered to the application system each day. Proposed new coatings subject to different VOC limits in §115.473(a) must not be combined for purposes of calculating the daily weighted average. In addition, determination of compliance is based on each adhesive application process. The proposed definition is consistent with the use of daily weighted average in other Chapter 115 rules and is the averaging period suggested in the EPA's 2008 CTG.

The definition of *Porous material* in proposed new paragraph (32) is a substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged, including, but not limited to, paper and corrugated paperboard. This definition is as recommended by the CTG and includes the clarification in the CTG that wood is not considered a porous material for the purposes of the definition. However, the commission requests comment on whether the definition recommended by the CTG is sufficient to determine classification for wood-based products under the adhesive application process control requirements.

Section 115.471, Exemptions

The commission proposes new §115.471, to list the proposed new exemptions recommended in EPA's 2007 Miscellaneous Industrial Adhesives CTG. Proposed new §115.471 establishes consistency with other Chapter 115 rules and makes the rules easier to read by clearly identifying the adhesive application processes that are exempt from all or portions of the subsequent rule requirements. The commission seeks comment on appropriate exemptions for adhesive application processes in the DFW and HGB areas.

Proposed new subsection (a) exempts the owner or operator of adhesive application processes located on a property with actual combined emissions of VOC less than 3.0 tons per calendar year, when uncontrolled, from all adhesives, adhesive primers, and solvents used during related cleaning operations, from the requirements of this division, except as specified in §115.478(b)(2). The commission agrees with the EPA's determination that requiring these small sources to comply with the control requirements in §115.473 is not economically feasible and does not constitute RACT. When determining if a source qualifies for this exemption or any other exemption that refers to uncontrolled VOC emissions, the combined VOC

emissions would be calculated without considering the emission reductions achieved through the use of any add-on controls or other operational changes.

Proposed new subsection (b) exempts the adhesive and adhesive primer application processes in paragraphs (1) - (7) from the VOC limit requirements in §115.473(a)(1). The processes in paragraphs (1) - (7) would be exempt from the proposed VOC content limits, application system requirements, and vapor control system requirements but would remain affected by the adhesive-related and cleaning material work practices standards. Proposed paragraph (1) exempts adhesives or adhesive primers being tested or evaluated in any research and development, quality assurance, or analytical laboratory. Proposed new paragraph (2) exempts adhesives or adhesive primers used in the assembly, repair, or manufacture of aerospace or undersea-based weapons systems. Proposed paragraph (3) exempts adhesives or adhesive primers used in medical equipment manufacturing operations. Proposed paragraph (4) exempts cyanoacrylate adhesive application processes. Proposed new paragraph (5) exempts aerosol adhesive and aerosol adhesive primer application processes. Proposed new paragraph (6) exempts processes using polyester-bonding putties to assemble fiberglass parts as fiberglass boat manufacturing properties. Proposed new paragraph (7) exempts processes using adhesives and adhesive primers that are supplied to the manufacturer in containers with a net volume of 16 ounces or less, or a net weight of 1.0 pound or less.

Proposed new subsection (c) exempts the owner or operator of any process or operation subject to another division of Chapter 115 that specifies adhesives or adhesive primer VOC content limits used during the adhesive application processes listed in the tables in proposed new §115.473(a) are exempt from the requirements in this division. The commission proposes this exemption to ensure that processes and operations involving adhesives or adhesive primers used in any of the adhesive application processes in §115.473(a) are not subject to duplicative control requirements.

Section 115.473, Control Requirements

The commission proposes new §115.473, to incorporate the EPA's 2008 Miscellaneous Industrial Adhesives recommendations for affected adhesive application processes in the DFW and HGB areas that the commission has determined to be RACT, except as specifically discussed.

Proposed new subsection (a) requires the owner or operator to limit VOC emissions from all adhesives and adhesive primers used during the specified adhesive application processes to the VOC content limits (minus water and exempt compounds) in the tables in proposed new subsection (a), as delivered to the application system. Proposed new subsection (a) indicates that these limits are based on the daily weighted average of all adhesives delivered to the adhesive primer or adhesive application system each day.

The tables in proposed subsection (a) contain the adhesive VOC content limits on a lb VOC/gal of adhesive basis (water and exempt compounds) for all of the application processes regulated by this division. If an adhesive is used to bond dissimilar substrates together, then the applicable substrate category with the least stringent VOC content limit applies. Table 1 in §115.473(a) contains the adhesive VOC content limits for general adhesive application processes. Table 2 in §115.473(a) contains the adhesive VOC content limits for specialty adhesive application processes. Table 3 in §115.473(a) contains the adhesive VOC content limits for adhesive primer application processes.

Proposed new paragraph (1) requires the VOC content limits in subsection (a) be met using one of the options provided in subparagraph (A) or (B). Proposed new subparagraph (A) allows the application of low-VOC adhesives to comply with the VOC content limits in proposed new §115.473(a). Proposed new subparagraph (B) allows the application of low-VOC adhesives in combination with a vapor control system to comply with the VOC content limits contained in proposed new §115.473(a). Various compliance options are provided to give affected owners or operators the flexibility to choose the appropriate option for the adhesive application processes performed at their site.

Proposed new paragraph (2) requires the owner or operator to operate a vapor control system capable of achieving an overall control efficiency of 85% of the VOC emissions from adhesives if the testing requirements in §115.475(3) and (4) are satisfied, as an alternative to demonstrating compliance with the VOC content limits in proposed new §115.473(a) through the options provided in paragraph (1). This alternative provides owners and operators the operational flexibility to use other means of controlling the VOC generated from adhesives instead of low-VOC content adhesives, especially when the use of high-VOC adhesives is necessary or desirable for product quality. Additionally, compliance with this option does not require the use of the specified application systems listed in §115.473(b).

The commission proposes new paragraph (3) to require an affected owner or operator choosing to comply with the option to apply low-VOC coatings in combination with a vapor control system to meet the VOC content limits in subsection (a)(1), to use the equations provided. This proposed new control requirement is necessary to demonstrate that the overall control efficiency of the vapor control system, when used in conjunction with low-VOC coatings, is sufficient to meet the VOC emission limits in §115.473. Proposed new paragraph (3) contains two equations to determine the lb VOC/gal of solids and to determine the overall control efficiency needed to meet the VOC content limits in §115.473. Proposed new paragraph (3) also requires control device and capture efficiency testing to be performed in accordance with the testing requirements in §115.475(3) and (4). The commission seeks comment on alternative methods for demonstrating compliance with the option to apply low-VOC coatings in combination with a vapor control system.

Proposed new subsection (b) requires the owner or operator of any adhesive application process subject to this division shall not apply adhesives unless one of the application systems in paragraphs (1) - (8) is used. The adhesive application systems are required for use in combination with the compliance options specified in subsection (a)(1). Proposed new paragraph (1) lists electrostatic spray. Proposed new paragraph (2) lists HVLP spray. Proposed new paragraph (3) lists flow coat. Proposed new paragraph (4) lists roll coat or hand application, including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application. Proposed new paragraph (5) lists dip coat. Proposed new paragraph (6) lists airless spray. Proposed new paragraph (7) lists air-assisted airless spray. Proposed new paragraph (8) lists the acceptable use of other adhesive application systems capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spray. Proposed new paragraph (8) states that for the purpose of this requirement, the transfer efficiency of HVLP spray is assumed to be 65%.

Proposed new subsection (c) requires the owner or operator of each adhesive application process subject to this division to implement the work practice procedures contained in paragraphs (1) and (2). The work practices aid in reducing VOC emissions generated from adhesive application processes and materials consumed during associated cleaning activities.

Proposed new paragraph (1) specifies the work practices the owner or operator shall implement for the storage, mixing, and handling of adhesives, thinners, and adhesive-related waste materials. Proposed new subparagraph (A) requires storage of all VOC-containing adhesives, adhesive primers, and process-related waste materials in closed containers. Proposed new subparagraph (B) ensures that mixing and storage containers used for VOC-containing adhesives, adhesive primers, and process-related waste materials are kept closed at all times. Proposed new subparagraph (C) requires minimization of spills of VOC-containing adhesives, adhesive primers, and process-related waste materials. Proposed subparagraph (D) requires that VOC-containing adhesives, adhesive primers, and process-related waste materials be conveyed from one location to another in closed containers or pipes.

Proposed new paragraph (2) specifies the work practices the owner or operator shall implement for the storage, mixing, and handling of all cleaning materials containing VOC. Any cleaning activity conducted during an adhesive application process, including surface preparation, constitutes cleaning materials and is subject to these work practices. Proposed new subparagraph (A) requires storage of all VOC-containing cleaning materials and used shop towels in closed containers. Proposed new subparagraph (B) ensures that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials. Proposed new subparagraph (C) requires minimization of spills of VOC-containing cleaning materials. Proposed new subparagraph (D) requires that VOC-containing cleaning materials be conveyed from one location to another in closed containers or pipes. Proposed new subparagraph (E) requires minimization of VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

Proposed new subsection (d) specifies that an adhesive application process that becomes subject to the provisions of §115.473(a) by exceeding the exemption limits in §115.471 is subject to the provisions in §115.473(a) even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with §115.473(a) and one of the conditions in paragraph (1) or (2) is met. This requirement is not a CTG recommendation. Proposed new subsection (d) is consistent with other Chapter 115 rules.

Proposed new paragraph (1) requires the project that caused a throughput or emission rate to fall below the exemption limits in §115.471 to be authorized by a permit, permit amendment, standard permit, or permit by rule required by Chapters 106 or 116. Proposed new paragraph (1) requires if a permit by rule is available for the project, compliance with §115.473(a) must be maintained for 30 days after the filing of documentation of compliance with that permit by rule. Proposed new paragraph (2) requires if authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

Section 115.474, Alternate Control Requirements

The commission proposes new §115.474, to provide for the owner or operator of an adhesive application process subject to this division, 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 if emission reductions are demonstrated to be substantially equivalent. This option is not a recommendation in the Miscellaneous Industrial Adhesive CTG but is consistent with the flexibility afforded to owners and operators regulated under other Chapter 115 rules.

Section 115.475, Approved Test Methods and Testing Requirements

The commission proposes new §115.475, to identify the test methods approved to determine compliance with the control requirements in this division. Proposed new §115.475 requires that the owner or operator demonstrate compliance with the VOC content limits in §115.473(a) by applying the test methods in proposed new §115.475. Proposed new §115.475 allows the owner or operator to exclude exempt solvents when determining compliance with a VOC content limit where a test method inadvertently measures compounds that are exempt solvents. The commission proposes this provision because compliance with the VOC content limits is based on the VOC concentration of a coating considering only the VOC and solids content. Proposed §115.475 provides, as an alternative to the test methods in this section, the VOC content of an adhesive may be determined by using analytical data from the MSDS.

Proposed new paragraph (1) requires that except for reactive adhesives, compliance with the VOC content limits in §115.473(a) must be determined using Method 24 (40 CFR Part 60, Appendix A). Proposed new paragraph (2) requires that compliance with the VOC content limits for reactive adhesives in §115.473(a) must be determined using 40 CFR Part 63, Subpart PPPP, Appendix A (as amended through April 24, 2007 (72 FR 20237)).

Proposed new paragraph (3) requires that the owner or operator of an adhesive application process subject to §115.473(a)(2) shall measure the capture efficiency using applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; and Procedure F.2 - Fugitive VOC Emissions from Building Enclosures.

Proposed new subparagraph (A) provides two exemptions in clauses (i) and (ii) that may apply to capture efficiency testing requirements. The exemptions from capture efficiency testing provided in clauses (i) and (ii) are identical to the capture efficiency testing exemptions currently provided in the existing §115.425(a)(7)(A) and proposed to be included in the proposed new §115.475. Proposed new clause (i) provides an exemption for sources with permanent total enclosure that meets the specifications of Procedure T and all VOC is directed to a control device. Proposed new clause (ii) provides an exemption if the source uses a control device designed to collect and recover VOC and the conditions in subclauses (I) and (II) are met.

Proposed new subparagraph (B) requires that the capture efficiency must be calculated using one of the protocols referenced. The proposed subparagraph additionally requires that any affected source must use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the EPA. The capture efficiency testing protocols included in proposed new subparagraph (B) are the same as those currently required in §115.425(a)(7)(B) except for non-substantive revisions and formatting to the equations to conform to current rule formatting standards.

Proposed new clause (i) lists the protocol for the gas/gas method using TTE. Additionally, the proposed clause requires the EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The equation required for the gas/gas method using a TTE is also provided in clause (i) with the definitions for the equation variables.

Proposed new clause (ii) lists the protocol for the liquid/gas method using TTE. Additionally, the proposed clause requires the EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The equation required for the liquid/gas method using a TTE is also provided in clause (ii) with the definitions for the equation variables.

Proposed new clause (iii) lists the protocol for the gas/gas method using the building or room enclosure in which the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The proposed clause requires that all fans and blowers in the building or room enclosure in which the affected source is located must be operating as they would under normal production. The equation required for the gas/gas method using a building or room enclosure in which the affected source is located is also provided in clause (iii) with the definitions for the equation variables.

Proposed new clause (iv) lists the protocol for the liquid/gas method using a building or room enclosure in which the affected source is located in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from the enclosure are measured while operating only the affected facility. The proposed clause requires that all fans and blowers in the building or room enclosure in which the affected source is located must be operated as they would under normal production. The equation required for the liquid/gas method using a building or room enclosure in which the affected source is located is also provided in clause (iv) with the definitions for the equation variables.

Proposed new subparagraph (C) requires the operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.478(a) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. Proposed new subparagraph (C) indicates the executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test. Proposed new subparagraph (C) ensures the operational parameters tested in the initial performance test are representative of those during normal operation.

Proposed new paragraph (4) lists the required methods used to determine compliance with the overall control efficiency option in proposed new §115.473(a)(2). The methods listed in proposed new paragraph (4) are used to determine the destruction or removal efficiency of control devices, such as a thermal oxidizer, that are used to comply with §115.473(a)(2). The methods listed in subparagraphs (A) - (D) include: Methods 1 - 4 (40 CFR Part 60, Appendix A) for determining flow rate; Method 25 (40 CFR Part 60 Appendix A) for determining total gaseous nonmethane organic emissions as carbon; Methods 25A or 25B (40 CFR Part 60, Appendix A) for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis; and the additional performance test procedures in 40 CFR §60.444 (as amended through October 17, 2000 (65 FR 61761)). Proposed new subparagraph (E) would allow the executive director to approve minor modifications to the methods in subparagraphs (A) - (D).

Proposed new paragraph (5) allows test methods other than those specified in paragraphs (1) - (4) if approved by the executive director and validated by 40 CFR Part 63, Appendix A, Method 301. Proposed new paragraph (5) also specifies that for purposes of this paragraph, substitute "executive director" each place that Method 301 references "administrator."

Section 115.478, Monitoring and Recordkeeping Requirements

The commission proposes new §115.478, to identify monitoring and recordkeeping sufficient to demonstrate compliance with the proposed control requirements.

Proposed new subsection (a) specifies that the monitoring requirements in subsection (a) apply to the owner or operator of an adhesive application process subject to this division that uses a vapor control system in accordance with §115.473(a)(2). Proposed new subsection (a) specifies that the owner or operator shall install and maintain monitors to accurately measure and record operational parameters of all required control devices, as necessary, to ensure the proper functioning of those devices in accordance with design specifications, including the requirements in paragraphs (1) - (4). The proposed control device monitoring requirements are consistent with those in other Chapter 115 rules, and the commission expects that these requirements are sufficient to ensure proper functioning of the equipment.

Proposed new paragraph (1) requires continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed. Proposed new paragraph (2) requires the total amount of VOC recovered by carbon adsorption or other solvent recovery systems during a calendar month. Proposed new paragraph (3) requires continuous monitoring of carbon adsorption bed exhaust. Proposed new paragraph (4) requires appropriate operating parameters for capture systems and control devices other than those specified in paragraphs (1) - (3).

Proposed new subsection (b) specifies that the recordkeeping requirements in paragraphs (1) - (4) apply to the owner or operator of an adhesive application process subject to this division. Proposed new paragraph (1) requires that the owner or operator shall maintain records of the testing data or the MSDS, in accordance with the requirements in §115.475(1). Proposed new paragraph (1) also requires that records must be sufficient to demonstrate continuous compliance with the VOC limits in §115.473(a). Proposed new paragraph (2) requires that the owner or operator of an adhesive or adhesive primer application process claiming an exemption in §115.473 shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria. For example, maintaining records of adhesive and solvent usage may be

sufficient to demonstrate continuous compliance with the exemption in §115.471(a). Proposed new paragraph (3) requires that the owner or operator shall maintain records of any testing conducted at an affected site in accordance with the provisions specified in §115.475(3). Proposed new paragraph (4) requires that records must be maintained a minimum of two years and be made available upon request to authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction. The proposed record retention period is consistent with other Chapter 115 rules. The commission seeks comment on the amount of time adequate to maintain records.

Section 115.479, Compliance Schedules

The commission proposes new §115.479, to list the compliance schedule for affected adhesive application processes in the DFW and HGB nonattainment areas subject to this division.

The commission proposes new subsection (a) requiring the owner or operator of an adhesive application process subject to this division to comply with the requirements in this division no later than March 1, 2013. The March 1, 2013, compliance date provides affected owners and operators approximately a year and a half to make any necessary changes and ensures that any VOC reductions achieved by the proposed rule will occur prior to the ozone season in the DFW area. The commission requests comment on appropriate compliance dates for the proposed new requirements.

The commission also proposes new subsection (b) to require the owner or operator of an adhesive application process that becomes subject to this division on or after March 1, 2013, to comply with the requirements in this division no later than 60 days after becoming subject. The commission requests comment on the amount of time adequate to comply with the requirements in this division for surface coating processes that become subject after the March 1, 2013, compliance date.

Fiscal Note: Costs to State and Local Government

Nina Chamness, Analyst, Strategic Planning and Assessment, has determined that, for the first five-year period the proposed rules are in effect, no significant fiscal implications are anticipated for the agency or other units of state or local government as a result of administration or enforcement of the proposed rules.

The proposed rules implement RACT for sources of VOC emissions per the CTG as required by the EPA for eight emission source categories in the DFW and HGB areas as required by the FCAA. The proposed rules would be submitted to the EPA for review and approval as part of the SIP.

The proposed rules would amend Chapter 115 to limit the VOC content of coatings and solvents used by affected industrial sites in the DFW and HGB areas for the following eight CTG emission source categories: flexible packaging printing; industrial cleaning solvents; large appliance coatings; metal furniture coatings; paper, film and foil coatings; miscellaneous industrial adhesives; miscellaneous metal and plastic parts coatings; and automobile and light-duty truck assembly coatings in the DFW area only. To further reduce VOC emissions, the proposed rules would also implement work practice standards for coating-related activities and solvent cleaning operations.

Fiscal impacts for the proposed rules are estimated using EPA CTG documents and estimates from a study commissioned by executive director staff, Pechan's *Industrial Cleaning Solvents and Miscellaneous Industrial Adhesives Inventory Research.*

Local governments (counties, municipalities, school districts, etc.) in the HGB and DFW areas may be affected by the proposed rules for industrial cleaning solvents. Examples of local government operations that may use these solvents are: school bus repair and maintenance; general auto repair and maintenance; and highway, street, bridge, and tunnel construction. Local government entities that use industrial cleaning solvents and have total actual VOC emissions less than 3.0 tpy are exempt from the proposed rules. Local government operations with total actual VOC emissions of 3.0 tpy or more in industrial cleaning solvent operations would be required to implement work practice procedures and reduce emissions from cleaning materials by March 1, 2013. In addition, the proposed rules impose monitoring and recordkeeping requirements to demonstrate compliance. Industrial cleaning solvents are used in many different operations for different purposes. Local governments are expected to choose the most cost-effective option when complying with RACT under the proposed rules. Costs to comply with the proposed rules would depend on a variety of factors including the compliance option used, the industrial process, and the type of solvent required to achieve an acceptable level of cleanliness. However, on average, local governments are expected to experience annual cost savings for a facility if they choose to switch to low-VOC materials. Savings should be similar to the amounts experienced by businesses that are estimated in the PUBLIC BENEFITS AND COSTS and SMALL BUSINESS AND MICRO-BUSINESS ASSESSMENT sections of this preamble.

Public Benefits and Costs

Nina Chamness also determined that for each year of the first five years the proposed rules are in effect, the public benefit anticipated from the changes seen in the proposed rules will be improved air quality in the DFW and HGB areas.

The proposed rules implement RACT for sources of VOC emissions per the CTG documents for flexible packaging printing; industrial cleaning solvents; large appliance coatings; metal furniture coatings; paper, film and foil coatings; miscellaneous industrial adhesives; and miscellaneous metal and plastic parts coatings facilities in the DFW and HGB areas. The proposed rules also implement RACT for automobile and light-duty truck assembly coatings in the DFW area. Costs implications are anticipated for businesses and individuals for each of the first five years the proposed rules are in effect. The fiscal impact of the proposed rules will vary depending on the compliance option used, the solvent or coating used, and site-specific characteristics.

Exempt Businesses

The proposed rules exempt certain businesses from VOC control requirements per the CTG documents. The following processes in the DFW area are exempt: flexible package printing lines that have the potential to emit less than 25 tpy; paper, film and foil coating lines that have the potential to emit less than 25 tpy; coating operations (large appliance coating; metal furniture coating; automobile and light-duty truck assembly coating; and miscellaneous metal and plastic part coating) located on a property with VOC emissions less than 3.0 pounds per hour and 15 pounds per day; miscellaneous industrial adhesive operations with total actual VOC emissions less than 3.0 tpy; and industrial cleaning solvent operations with total actual VOC emissions less than 3.0 tpy. The following processes in the HGB area are

exempt: flexible package printing lines that have the potential to emit less than 25 tpy; paper, film and foil coating lines that have the potential to emit less than 25 tpy; coating operations (large appliance coating, metal furniture coating; and miscellaneous metal and plastic part coating) located on property with VOC emissions less than 3.0 pounds per hour and 15 pounds per day; miscellaneous industrial adhesive operations with total actual VOC emissions less than 3.0 tpy; and industrial cleaning solvent operations with total actual VOC emissions less than 3.0 tpy.

Non-Exempt Business

In general, businesses not exempt from the proposed rules are expected to choose the least expensive option provided to reduce VOC emissions in their operations. Typically, the least expensive option for businesses will be to use, if they are not already doing so, VOC-compliant inks, solvents, and coatings.

Flexible Package Printing

Potentially five sites could be affected by the proposed rules, but it appears that VOC emissions in these printing operations are currently controlled to a level at least equivalent to the level required by the proposed rules. For flexible package printing lines with currently uncontrolled VOC emissions, the proposed rules provide several compliance options, and costs will vary depending on a number of factors. Options under the proposed rules are switching to low-VOC materials, using a combination of low-VOC materials and add-on controls, or using only add-on controls that meet efficiency standards prescribed by the proposed rules.

Switching to low-VOC alternative inks, coatings, and adhesives is expected to be significantly less than installing or updating controls, but data on material costs are not available from the CTG document. The proposed rules require lines emitting 3.0 or more tpy to implement work practices aimed at reducing the amount of material that evaporates and is wasted. Work practices can range from storing VOC emitting materials in closed containers and minimizing spills to minimizing air circulation around solvent cleaning operations.

If a site is not using low-VOC materials, then add-on controls would be required, the cost of which would vary depending on flow rate, hourly solvent use rate, and operating hours. For a line with the potential to emit more than 25 tpy, a fixed bed catalytic oxidizer could cost $142,000 to $341,000 depending on the design, and annual operating costs are estimated to range from $26,200 to $47,500. Per ton of VOC reduced, the cost for add-on controls for flexible package printing lines is expected to range from $1,300 to $2,800. Testing, monitoring, and recordkeeping costs would also be incurred.

Industrial Cleaning Solvents

There are an estimated 158 large businesses in the DFW and HGB areas that could be affected by the proposed rules. These businesses are expected to save $1,840 per year by switching to low-VOC cleaning solvents, and the proposed rules require the implementation of work practices that are expected to reduce the amount of material evaporation and waste.

Fiscal impacts of the proposed rules will vary depending on the compliance option used and site-specific factors such as the type of industrial process and the type of solvent used. If add-on controls, such as catalytic or thermal incinerators, are used, costs could be significant and would depend on the flue gas volumetric flow rate and energy recovery. Neither the CTG document nor the Pechan study previously referenced in this preamble provided information regarding the cost of add-on controls.

Automobile and Light-Duty Truck Assembly Coatings

There is one identified manufacturer in the DFW area that could be affected by the proposed rules. Both EPA and the commission expect that these coating sites have already reduced their VOC emissions to comply with federal standards, and the EPA does not anticipate any additional cost as a result of the proposed rules. However, the EPA expects that work practice procedures could reduce the amount of cleaning materials used because of reduced evaporation and waste.

Large Appliance Coating

There is one identified site in the DFW area that could be affected by the proposed rules. Because add-on controls would be a costly alternative in complying with the proposed rules, it is expected that this operation will switch to low-VOC solvent formulas, the cost of which ranges from approximately $730 per year for a small plant to $25,900 per year for a large plant. The EPA has estimated that on a per ton basis, switching to low-VOC formulas costs $500 per ton of VOC reduced. In addition, the proposed rules may require the purchase of a coating application system, the cost of which is not expected to be significant. These systems are estimated to range from $200 for a HVLP spray gun to $1,400 for a complete system.

Metal Furniture Coatings

There are two identified sites that could be affected by the proposed rules. Because add-on controls would be a costly alternative in complying with the proposed rules, it is expected that this operation will switch to low-VOC solvent formulas, the cost of which ranges from approximately $600 to $36,000 per facility, or $200 per ton of VOC reduced. In addition, the proposed rules may require the purchase of a coating application system, the cost of which is not expected to be significant. These systems are estimated to range from $200 for a HVLP spray gun to $1,400 for a complete system.

If the facility chooses add-on controls, such as a permanent total enclosure and a thermal oxidizer, capital costs could be as much as $3.5 million to $6.3 million, and annual operating costs are estimated to range from $575,000 to $1.1 million. The proposed rules also require the implementation of work practices that are expected to reduce the amount of material evaporation and waste.

Paper, Film, and Foil Coatings

There is one identified site that could be affected by the proposed rules. Add-on controls would be a costly alternative in complying with the proposed rules, and it is expected that these coating operations will switch to low-VOC solvent formulas. The cost of controls for a 90% emission reduction is estimated to be $1,200 per ton of VOC emissions reduced. No estimates are available for costs to switch to low-VOC solvent formulas, but this alternative is expected to be significantly less than installing and upgrading add-on controls. The proposed rules also require the implementation of work practices that are expected to reduce the amount of material evaporation and waste.

Miscellaneous Industrial Adhesives

Owners and operators of 26 identified large businesses in the DFW and HGB areas are expected to use low-VOC adhesives when complying with the proposed rules since add-on controls such as catalytic or thermal incinerators would be more costly.

Costs for these controls would depend on the flue gas volumetric flow rate and energy recovery. The cost for a large business to switch to a low-VOC adhesive is estimated to be $4,480 per year. In addition, the proposed rules may require the purchase of a coating application system for low-VOC material application. The cost of a system is not expected to be significant with an estimated range from $200 for a HVLP spray gun to $1,400 for a complete system. The proposed rules also require the implementation of work practices that are expected to reduce the amount of material evaporation and waste.

Miscellaneous Metal and Plastic Parts Coatings

There are potentially 20 sites affected by the proposed rules. The estimated costs of switching to low-VOC coatings range from $2,600 to $115,000 per year per facility depending on the coatings usage or $1,758 per ton of VOC reduced. The proposed rules also require the implementation of work practices that are expected to reduce the amount of material evaporation and waste. In addition, the proposed rules may require the purchase of a coating application system, the cost of which is not expected to be significant. These systems are estimated to range from $200 for a HVLP spray gun to $1,400 for a complete system.

Testing and Recordkeeping Requirements

If businesses choose to rely on the manufacturer's formulation data for materials, no additional testing costs are expected. Businesses can also choose to comply with coating VOC limit requirements by using EPA Test Method 24 under current rules. EPA Test Method 24 is estimated to cost $450 per sample ($350 for lab testing and $100 for sample handling and preparation).

If businesses choose to use add-on controls instead of using low-VOC materials, they will incur one-time costs to test control efficiency. Testing costs are estimated to range from $10,000 to $20,000 per vapor control system for initial demonstration of control efficiency.

Small Business and Micro-Business Assessment

Adverse fiscal implications are anticipated for small and micro-businesses in the DFW and HGB areas as a result of the proposed rules if they are not using low-VOC materials. However, the proposed rules allow them to use a material with a low-VOC formulation or to add controls to current processes to comply with the low-VOC emission requirements. As with large businesses, a small business is expected to choose the most economical option for their operation.

Some small businesses will be exempt from the proposed rules depending on whether their actual VOC emissions meet exemption criteria. The following small businesses in the DFW area are exempt: flexible package printing lines that have the potential to emit less than 25 tpy; paper, film, and foil coating lines with the potential to emit less than 25 tpy; coating operations (large appliance coating, metal furniture coating; automobile and light-duty truck assembly coating; and miscellaneous metal and plastic part coating) located on property with VOC emissions less than 3.0 pounds per hour and 15 pounds per day; miscellaneous industrial adhesive operations with total actual VOC emissions less than 3.0 tpy; and industrial cleaning solvent operations with total actual VOC emissions less than 3.0 tpy. The following small businesses in the HGB area are exempt: flexible package printing lines that have the potential to emit less than 25 tpy; paper, film, and foil coating lines with the potential to emit less than 25 tpy; coating operations (large appliance coating, metal furniture coating; and miscellaneous metal and plastic part coating) located on property with VOC emissions less than 3.0 pounds per hour and 15 pounds per day; miscellaneous industrial adhesive operations with total actual VOC emissions less than 3.0 tpy; and industrial cleaning solvent operations with total actual VOC emissions less than 3.0 tpy.

There may be as many as 81 small businesses that may be affected by the proposed rules concerning miscellaneous industrial adhesives and 108 small businesses affected by proposed rules concerning industrial cleaning solvents in the DFW and HGB areas. There may also be non-exempt small businesses that have flexible package printing operations and coating operations.

In general, small businesses should experience the same costs or cost savings as a large business under the proposed rules. However, a small business affected by the proposed rules for miscellaneous industrial adhesives could incur costs of $1,490 per year by switching to a low-VOC formula. For small businesses using industrial cleaning solvents, fiscal implications will vary depending on a variety of factors, but by switching to a low-VOC formula, a small business could save, on average, as much as $2,760 per year.

Small Business Regulatory Flexibility Analysis

The commission has reviewed this proposed rulemaking and determined that a small business regulatory flexibility analysis is not required because the proposed rules are required to comply with federal regulations.

Local Employment Impact Statement

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

Draft Regulatory Impact Analysis Determination

The commission reviewed the proposed rulemaking in light of the regulatory impact analysis requirements of Texas Government Code, §2001.0225, and determined that the proposed rulemaking meets the definition of a "major environmental rule" as defined in that statute. A "major environmental rule" means a rule, the specific intent of which is to protect the environment or reduce risks to human health from environmental exposure, and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The proposed rulemaking does not, however, meet any of the four applicability criteria for requiring a regulatory impact analysis for a major environmental rule, which are listed in Texas Government Code, §2001.0225(a). Texas Government Code, §2001.0225, applies only to a major environmental rule, the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the agency instead of under a specific state law.

The proposed rules implement the EPA's RACT recommendations for sources of VOC emissions for sources of VOC emissions in the DFW and HGB areas as required by FCAA,

§172(c)(1), except for EPA recommendations that would be less stringent than the current requirements of Chapter 115 for these source categories. FCAA, §172(c)(1) requires the SIP for nonattainment areas to include reasonably available control measures, including RACT, for sources of pollutants identified by the EPA as required by FCAA, §183(e). FCAA, §182(b)(2) provides that for certain nonattainment areas, states must revise their SIP to include RACT for sources of VOC emissions covered by a CTG document issued after November 15, 1990, and prior to the area's date of attainment. The EPA published CTG documents in 2006 for Industrial Cleaning Solvents (EPA 453/R-06-001) and Flexible Package Printing (EPA 453/R-06-003); in 2007 for Paper, Film, and Foil Coatings (EPA 453/R-07-003), Large Appliance Coatings (EPA 453/R-07-004), and Metal Furniture Coatings (EPA 453/R-07-005); and in 2008 for Miscellaneous Metal and Plastic Parts (EPA-453/R-08-003), Miscellaneous Industrial Adhesives (EPA-453/R-08-005), and Automobile and Light-Duty Truck Assembly Coatings (EPA-453/R-08-006). Specifically, the proposed rules would limit the VOC content of coatings and solvents used by affected industrial sites in the DFW and HGB areas for the following seven CTG emission source categories: flexible package printing; industrial cleaning solvents; large appliance coatings; metal furniture coatings; paper, film, and foil coatings; miscellaneous industrial adhesives; and miscellaneous metal and plastic parts coatings. The proposed rules would also limit the VOC content of coatings and solvents used by affected sites in the DFW area for the automobile and light-duty truck assembly coating CTG emission source category. To further reduce VOC emissions, the proposed rules would also implement work practice standards for coating-related activities and solvent cleaning operations.

The proposed rulemaking implements requirements of 42 USC, §7410, which requires states to adopt a SIP that provides for the implementation, maintenance, and enforcement of the NAAQS in each air quality control region of the state. While 42 USC, §7410 generally does not require specific programs, methods, or reductions in order to meet the standard, the SIP must include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance as may be necessary or appropriate to meet the applicable requirements of this chapter (42 USC, Chapter 85, Air Pollution Prevention and Control). The provisions of the FCAA recognize that states are in the best position to determine what programs and controls are necessary or appropriate in order to meet the NAAQS. This flexibility allows states, affected industry, and the public, to collaborate on the best methods for attaining the NAAQS for the specific regions in the state. Even though the FCAA allows states to develop their own programs, this flexibility does not relieve a state from developing a program that meets the requirements of 42 USC, §7410. States are not free to ignore the requirements of 42 USC, §7410, and must develop programs to assure that their contributions to nonattainment areas are reduced so that these areas can be brought into attainment on schedule. Additionally, states have further obligations under FCAA, §172(c)(1) and §182(b)(2) to provide for RACT in nonattainment areas, such as HGB and DFW. The proposed rulemaking will implement RACT for flexible package printing; industrial cleaning solvents; large appliance coatings; metal furniture coatings; paper, film, and foil coatings; miscellaneous industrial adhesives; and miscellaneous metal and plastic parts coatings in the DFW and HGB areas, and for automobile and light-duty truck coatings in the DFW area, as well as implement work practice standards for coating-related activities and solvent cleaning operations. Implementation of RACT is a necessary and required component of developing the SIP for nonattainment areas as required by 42 USC, §7410.

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

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

The commission has consistently applied this construction to its rules since this statute was enacted in 1997. Since that time, the legislature has revised the Texas Government Code, but left this provision substantially unamended. It is presumed that "when an agency interpretation is in effect at the time the legislature amends the laws without making substantial change in the statute, the legislature is deemed to have accepted the agency's interpretation." Central Power & Light Co. v. Sharp, 919 S.W.2d 485, 489 (Tex. App. Austin 1995), *writ denied with per curiam opinion respecting another issue,* 960 S.W.2d 617 (Tex. 1997); Bullock v. Marathon Oil Co., 798 S.W.2d 353, 357 (Tex. App. Austin 1990, *no writ). Cf. Humble Oil & Refining Co. v. Calvert,* 414 S.W.2d 172 (Tex. 1967); *Dudney v. State Farm Mut. Auto*

Ins. Co., 9 S.W.3d 884, 893 (Tex. App. Austin 2000); *Southwestern Life Ins. Co. v. Montemayor*, 24 S.W.3d 581 (Tex. App. Austin 2000, pet. denied); and *Coastal Indust. Water Auth. v. Trinity Portland Cement Div.*, 563 S.W.2d 916 (Tex. 1978).

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

The specific intent of the proposed rulemaking is to protect the environment and to reduce risks to human health by requiring control measures for flexible package printing; industrial cleaning solvents; large appliance coatings; metal furniture coatings; paper, film, and foil coatings; miscellaneous industrial adhesives; and miscellaneous metal and plastic parts coatings in the DFW and HGB areas, and for automobile and light-duty truck assembly coatings in the DFW area that have been determined by the commission to be RACT. To further reduce VOC emissions, the proposed rules would also implement work practice standards for coating-related activities and solvent cleaning operations. The proposed rulemaking does not exceed a standard set by federal law or exceed an express requirement of state law. No contract or delegation agreement covers the topic that is the subject of this proposed rulemaking. Therefore, this proposed rulemaking is not subject to the regulatory analysis provisions of Texas Government Code, §2001.0225(b), because although the proposed rulemaking meets the definition of a "major environmental rule," it does not meet any of the four applicability criteria for a major environmental rule.

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

Written comments on the draft regulatory impact analysis determination may be submitted to the contact person at the address listed under the SUBMITTAL OF COMMENTS section of this preamble.

Takings Impact Assessment

The commission evaluated the proposed rulemaking and performed an assessment of whether Texas Government Code, Chapter 2007, is applicable. The specific purpose of the proposed rulemaking is to implement RACT for flexible package printing; industrial cleaning solvents; large appliance coatings; metal furniture coatings; paper, film, and foil coatings; miscellaneous industrial adhesives; and miscellaneous metal and plastic parts coatings facilities in the DFW and HGB areas, and for automobile and light-duty truck assembly coatings in the DFW area. To further reduce VOC emissions, the proposed rules would also implement work practice standards for coating-related activities and solvent cleaning operations. FCAA, §182(b)(2), provides that for certain nonattainment areas, states must revise their SIP to include RACT for sources of VOC emissions covered by a CTG document issued after November 15, 1990, and prior to the area's date of attainment. The EPA published CTG documents in 2006 for Industrial Cleaning Solvents (EPA 453/R-06-001) and Flexible Package Printing (EPA 453/R-06-003); in 2007 for Paper, Film, and Foil Coatings (EPA 453/R-07-003), Large Appliance Coatings (EPA 453/R-07-004), and Metal Furniture Coatings (EPA 453/R-07-005); and in 2008 for Miscellaneous Metal and Plastic Parts (EPA-453/R-08-003), Miscellaneous Industrial Adhesives (EPA-453/R-08-005), and Automobile and Light-Duty Truck Assembly Coatings (EPA-453/R-08-006). Texas Government Code, §2007.003(b)(4), provides that Texas Government Code, Chapter 2007 does not apply to this proposed rulemaking because it is an action reasonably taken to fulfill an obligation mandated by federal law.

In addition, the commission's assessment indicates that Texas Government Code, Chapter 2007 does not apply to these proposed rules because this is an action that is taken in response to a real and substantial threat to public health and safety; that is designed to significantly advance the health and safety purpose; and that does not impose a greater burden than is necessary to achieve the health and safety purpose. Thus, this action is exempt under Texas Government Code, §2007.003(b)(13). The proposed rules fulfill the FCAA requirement to implement RACT in nonattainment areas. These revisions will result in VOC emission reductions in ozone nonattainment areas which may contribute to the timely attainment of the ozone standard and reduced public exposure to VOC. Consequently, the proposed rulemaking meets the exemption criteria in Texas Government Code, §2007.003(b)(4) and (13). For these reasons, Texas Government Code, Chapter 2007 does not apply to this proposed rulemaking.

Consistency with the Coastal Management Program

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

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

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

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

Effect on Sites Subject to the Federal Operating Permits Program

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

Announcement of Hearings

The commission will hold public hearings on this proposal in Arlington on July 14, 2011, at 10:00 a.m. and 6:30 p.m. at the Arlington City Council Chambers 101 W. Abrams Street, Arlington, TX 76010; in Houston on July 18, 2011, at 6:30 p.m. at the Houston-Galveston Area Council, 3555 Timmons Lane, Houston, TX 77027 in Conference Room C; and in Austin on July 22, 2011, at 10:00 a.m. and 2:00 p.m. at the Texas Commission on Environmental Quality, Building E, Room 201S, 12100 Park 35 Circle, Austin, TX 78753. The hearings are structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes prior to each hearing.

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

Submittal of Comments

Written comments may be submitted to Michael Parrish, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at: *http://www5.tceq.state.gov/rules/ecomments/*. File size restrictions may apply to comments being submitted via the eComments system. All comments should reference Rule Project Number 2010-016-115-EN. The comment period closes July 25, 2011. Copies of the proposed rulemaking can be obtained from the commission's Web site at *http://www.tceq.state.texas.gov/nav/rules/propose_adopt.html*. For further information, please contact Frances Dowlak, Air Quality Planning Section, at (512) 239-3931.

DIVISION 2. SURFACE COATING PROCESSES

30 TAC §§115.422, 115.427, 115.429

Statutory Authority

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

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

§115.422. Control Requirements.

In the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), the following control requirements apply. [~~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 compounds [~~compound~~] (VOC) emissions during equipment cleanup by using [~~utilizing~~] the following procedures:

(A) install and operate a system that [~~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 must [~~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 may [~~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 may [~~shall~~] be used to prepare the booth prior to applying the booth coating.

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

(C) Conventional air spray guns may [~~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 kilogram [~~kilograms~~] of VOC per kilogram of solids (1.0 pound [~~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 must [~~shall~~] be pumped or drained into a normally closed container.

(E) Emissions from washoff operations must [~~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 must [shall] be conducted in a manner that minimizes spills.

(B) All containers, tanks, vats, drums, and piping systems must [~~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 must [~~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 must [~~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 must [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 five [~~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 that the United States Environmental Protection Agency (EPA) [~~for which EPA~~] has allocated essential use allowances or exemptions in 40 Code of Federal Regulations §82.4 (as amended through May 10, 1995 (60 FR 24986)), including any future amendments promulgated by the 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 must [~~shall~~] be removed and the enclosed cleaner must [~~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 must [~~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 must [~~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 shall [~~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 exemption limits in [~~provisions of~~] §115.427(a) of this title (relating to Exemptions) is [~~shall remain~~] subject to the provisions in §115.421(a) of this title, even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with §115.421(a) of this title and one of the following conditions is met. [~~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 [~~the~~] project that caused the [~~by which~~] throughput or emission rate to fall below the exemption limits in §115.427(a) of this title must be [~~was reduced is~~] authorized by a [~~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, the owner or operator shall continue to comply with §115.421(a) of this title [~~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 [~~if~~] authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide [~~owner/operator has given~~] the executive director 30 days [~~days'~~] notice of the project in writing.

(7) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, the owner or operator of a paper surface coating line subject to this division shall implement the following work practices to limit VOC emissions from storage, mixing, and handling of cleaning and cleaning-related waste materials.

(A) All VOC-containing cleaning materials must be stored in closed containers.

(B) Mixing and storage containers used for VOC-containing materials must be kept closed at all times except when depositing or removing these materials.

(C) Spills of VOC-containing cleaning materials must be minimized.

(D) VOC-containing cleaning materials must be conveyed from one location to another in closed containers or pipes.

(E) VOC emissions from the cleaning of storage, mixing, and conveying equipment must be minimized.

§115.427. Exemptions.

(a) In [~~For~~] the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, the following exemptions apply.

(1) The following coating operations are exempt from §115.421(a)(9) of this title (relating to Emission Specifications):

(A) aerospace vehicles and components;

(B) vehicle refinishing (body shops), except as required by §115.421(a)(8)(B) and (C) of this title; and

(C) ships and offshore oil or gas drilling platforms, except as required by §115.421(a)(15) of this title.

(2) The following coating operations are exempt from §115.421(a)(10) of this title:

(A) the manufacture of exterior siding;

(B) tile board; or

(C) particle board used as a furniture component.

(3) The following exemptions apply to surface coating operations, except for vehicle refinishing (body shops) controlled by §115.421(a)(8)(B) and (C) of this title. Excluded from the volatile organic compounds [~~compound~~] (VOC) emission calculations are coatings and solvents used in surface coating activities that are not addressed by the surface coating categories of §115.421(a)(1) - (15) or §115.453 of this title (relating to Control Requirements). For example, architectural coatings (i.e., coatings that are applied in the field to stationary structures and their appurtenances, to portable buildings, to pavements, or to curbs) at a property would not be included in the calculations.

(A) Surface coating operations on a property that, when uncontrolled, will emit a combined weight of VOC of less than 3.0 [~~three~~] pounds per hour and 15 pounds in any consecutive 24-hour period are exempt from §115.421(a) of this title and §115.423 of this title (relating to Alternate Control Requirements).

(B) Surface coating operations on a property that, when uncontrolled, will emit a combined weight of VOC of less than 100 pounds in any consecutive 24-hour period are exempt from §115.421(a) and §115.423 of this title if documentation is provided to and approved by both the executive director and the United States Environmental Protection Agency [~~EPA~~] to demonstrate that necessary coating performance criteria cannot be achieved with coatings that satisfy applicable emission specifications and that control equipment is not technically or economically feasible.

(C) Surface coating operations on a property for which total coating and solvent usage does not exceed 150 gallons in any consecutive 12-month period are exempt from §115.421(a) and §115.423 of this title.

(D) Mirror backing coating operations located on a property that, when uncontrolled, emit a combined weight of VOC less than 25 tons in one year (based on historical coating and solvent usage) are exempt from this division (relating to Surface Coating Processes).

(E) Wood furniture manufacturing facilities that are subject to and are complying with §115.421(a)(14) of this title and §115.422(3) of this title (relating to Control Requirements) are exempt from §115.421(a)(13) of this title. These wood furniture manufacturing facilities must continue to comply with §115.421(a)(13) of this title until these facilities are in compliance with §115.421(a)(14) and §115.422(3) of this title.

(F) Wood furniture manufacturing facilities that, when uncontrolled, emit a combined weight of VOC from wood furniture manufacturing operations less than 25 tons per year are exempt from §115.421(a)(14) and §115.422(3) of this title.

(G) Wood parts and products coating facilities in Hardin, Jefferson, and Orange Counties are exempt from §115.421(a)(13) of this title.

(H) Shipbuilding and ship repair operations in Hardin, Jefferson, and Orange Counties that, when uncontrolled, emit a combined weight of VOC from ship and offshore oil or gas drilling platform surface coating operations less than 50 tons per year are exempt from §115.421(a)(15) and §115.422(4) of this title.

(I) Shipbuilding and ship repair operations in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties that, when uncontrolled, emit a combined weight of VOC from ship and offshore oil or gas drilling platform surface coating operations less than 25 tons per year are exempt from §115.421(a)(15) and §115.422(4) of this title.

(J) The following activities where cleaning and coating of aerospace vehicles or components may take place are exempt from this division: research and development, quality control, laboratory testing, and electronic parts and assemblies, except for cleaning and coating of completed assemblies.

(4) Vehicle refinishing (body shops) in Hardin, Jefferson, and Orange Counties are exempt from §115.421(a)(8)(B) and §115.422(1) and (2) of this title.

(5) The coating of vehicles at in-house (fleet) vehicle refinishing operations and the coating of vehicles by private individuals are exempt from §115.421(a)(8)(B) and §115.422(1) and (2) of this title. This exemption is not applicable if the coating of a vehicle by a private individual occurs at a commercial operation.

(6) Aerosol coatings (spray paint) are exempt from this division.

(7) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), the following surface coating categories that are subject to the requirements of Chapter 115, Subchapter E, Division 5 of this title (relating to Control Requirements for Surface Coating Processes) are exempt from the requirements in this division:

(A) large appliance coating;

(B) metal furniture coating;

(C) miscellaneous metal parts and products coating;

(D) each paper coating line with the potential to emit equal to or greater than 25 tons per year of VOC from all coatings applied; and

(E) automobile and light-duty truck manufacturing coating.

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

(1) Surface coating operations located at any property that, when uncontrolled, will emit a combined weight of VOC less than 550 pounds (249.5 kilograms [~~kg~~]) in any continuous 24-hour period are exempt from §115.421(b) of this title. Excluded from this calculation are coatings and solvents used in surface coating activities that are not addressed by the surface coating categories of §115.421(b)(1) - (10) of this title. For example, architectural coatings (i.e., coatings that are applied in the field to stationary structures and their appurtenances, to portable buildings, to pavements, or to curbs) at a property would not be included in the calculation.

(2) The following coating operations are exempt from §115.421(b)(8) of this title:

(A) aerospace vehicles and components;

(B) vehicle refinishing (body shops); and

(C) ships and offshore oil or gas drilling platforms.

(3) The following coating operations are exempt from §115.421(b)(9) of this title:

(A) the manufacture of exterior siding;

(B) tile board; or

(C) particle board used as a furniture component.

(4) Aerosol coatings (spray paint) are exempt from this division.

§115.429. Counties and Compliance Schedules.

(a) The owner or operator of each surface coating operation in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Gregg, Hardin, Harris, Jefferson, Liberty, Montgomery, Nueces, Orange, Tarrant, Victoria, and Waller Counties shall continue to comply with this division (relating to Surface Coating Processes) as required by §115.930 of this title (relating to Compliance Dates).

(b) The owner or operator of each surface coating operation in Ellis, Johnson, Kaufman, Parker, and Rockwall Counties shall comply with this division as soon as practicable, but no later than June 15, 2007.

(c) The owner or operator of each shipbuilding and ship repair operation in Hardin, Jefferson, and Orange Counties that, when uncontrolled, emits a combined weight of volatile organic compounds from ship and offshore oil or gas drilling platform surface coating operations equal to or greater than 50 tons per year and less than 100 tons per year shall comply with this division as soon as practicable, but no later than December 31, 2006.

(d) The owner or operator of a paper surface coating process located in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), shall comply with the requirements in §115.422(7) of this title (relating to Control Requirements), no later than March 1, 2013.

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

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

TRD-201102113
Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
Earliest possible date of adoption: July 24, 2011
For further information, please call: (512) 239-2548

♦ ♦ ♦

DIVISION 3. FLEXOGRAPHIC AND ROTOGRAVURE PRINTING

30 TAC §§115.430 - 115.433, 115.435, 115.436, 115.439

Statutory Authority

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

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

§115.430. Applicability and Definitions [~~*Flexographic and Rotogravure Printing Definitions*~~].

(a) Applicability. The requirements in this division apply to the following flexographic and rotogravure printing processes in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), and in Gregg, Nueces, and Victoria Counties: [~~The following words and 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 of this title (relating to Definitions), §101.1 of this title (relating to Definitions), and §3.2 of this title (relating to Definitions).~~]

(1) packaging rotogravure printing lines;

(2) publication rotogravure printing lines;

(3) flexographic printing lines; and

(4) flexible package printing lines.

(b) Definitions. Unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10 of this title (relating to Definitions respectively), the terms in this division have the meanings commonly used in the field of air pollution control. In addition, the following meanings apply in this division unless the context clearly indicates otherwise.

(1) Daily weighted average--The total weight of volatile organic compounds (VOC) emissions from all inks and coatings subject to the same VOC content limit in §115.432 of this title (relating to Control Requirements), divided by the total volume or weight of those materials (minus water and exempt solvent) or divided by the total volume or weight of solids, applied to each printing line per day.

(2) Flexible package printing--Flexographic or rotogravure printing on any package or part of a package the shape of which can be readily changed including, but not limited to, bags, pouches, liners, and wraps using paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials.

(3) [~~(1)~~] Flexographic printing [~~process~~]--A method of printing in which the image areas are raised above the non-image areas, and the image carrier is made of an elastomeric material.

(4) [~~(2)~~] Packaging rotogravure printing--Any rotogravure printing on [~~upon~~] paper, paper board, metal foil, plastic film, or any other substrate that [~~which~~] is, in subsequent operations, formed into packaging products or labels.

(5) [~~(3)~~] Publication rotogravure printing--Any rotogravure printing on [~~upon~~] paper that [~~which~~] is subsequently formed

into books, magazines, catalogues, brochures, directories, newspaper supplements, or other types of printed materials.

(6) [(4)] Rotogravure printing--The application of words, designs, or [and/or] pictures to any substrate by means of a roll printing technique that [which] involves a recessed image area. The recessed area is loaded with ink and pressed directly to the substrate for image transfer.

§115.431. Exemptions.

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

(1) In the Beaumont-Port Arthur, Dallas-Fort Worth, and El Paso areas, all rotogravure and flexographic printing lines on a property that, when uncontrolled, have a maximum potential to emit a combined weight of volatile organic compounds (VOC) less than 50 tons per year (based on historical ink and VOC solvent usage, and at maximum production capacity) are exempt from the requirements in §115.432(a) of this title (relating to Control Requirements).

(2) In the Houston-Galveston-Brazoria area, all rotogravure and flexographic printing lines on a property that, when uncontrolled, have a maximum potential to emit a combined weight of VOC less than 25 tons per year (based on historical ink and VOC solvent usage, and at maximum production capacity) are exempt from the requirements in §115.432(a) of this title.

(3) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, all flexible package printing lines located on a property that have a combined weight of total actual VOC emissions less than 3.0 tons per year from all coatings, as defined in §101.1 of this title (relating to Definitions), and all associated cleaning operations are exempt from the requirements in §115.432(c) and (d) of this title.

(4) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, each flexible package printing line that, when uncontrolled, has a maximum potential to emit total VOC less than 25 tons per year from all coatings is exempt from the requirements in §115.432(c) of this title.

(b) In Gregg, Nueces, and Victoria Counties, all rotogravure and flexographic printing lines on a property that, when uncontrolled, emit a combined weight of VOC less than 100 tons per year (based on historical ink and VOC solvent usage) are exempt from the requirements in §115.432(b) of this title.

§115.432. Control Requirements.

(a) In the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, [For 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 control requirements [shall] apply. Beginning March 1, 2013, this subsection no longer applies to flexible package printing lines in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas that are required to comply with the requirements in subsection (c) of this section.

(1) The owner or operator shall limit the volatile organic compounds (VOC) emissions from solvent-containing ink used on each packaging rotogravure, publication rotogravure, flexible package, and flexographic printing line by using one of the following options. [No person shall operate or allow the operation of a packaging rotogravure, publication rotogravure, or flexographic printing line that uses solvent-containing ink unless volatile organic compound (VOC) emissions are limited by one of the following:]

(A) The owner or operator shall apply [application to the substrate of] low solvent ink with a volatile fraction containing 25% by volume or less of VOC solvent and 75% by volume or more of water and exempt solvent.[;]

(B) The owner or operator shall apply [application to the substrate of] high solids solvent-borne ink containing 60% by volume or more of nonvolatile material (minus water and exempt solvent).[; or]

(C) The owner or operator shall operate [operation of] a vapor control system to reduce the VOC emissions from an effective capture system by at least 90% by weight. The design and operation of the capture system for each printing line must be consistent with good engineering practice and must achieve [shall be required to provide for] an overall control efficiency [reduction in VOC emissions], as demonstrated to the satisfaction of the executive director, upon request, of at least the following weight percentages:

(i) 75% for a publication rotogravure process;

(ii) 65% for a packaging rotogravure process; [or]

(iii) 60% for a flexographic printing process; or[.]

(iv) for a flexible package printing process, the overall control efficiency in clause (ii) or (iii) of this subparagraph, depending on the type of press used.

(2) A flexographic and rotogravure printing lines that becomes [Any graphic arts facility that becomes] subject to paragraph (1) [the provisions of paragraph (1)(A), (B), or (C)] of this subsection by exceeding the exemption limits in §115.431(a) [provisions of §115.437(a)] of this title (relating to Exemptions) is [will remain] subject to the provisions of this subsection[,] even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with paragraph (1) of this subsection and one of the following conditions is met. [and until emissions are reduced to no more than the controlled emissions level existing prior to implementation of the project by which throughput or emission rate was reduced to less than the applicable exemption limits in §115.437(a) of this title and:]

(A) The [the] project that caused the [by which] throughput or emission rate to fall below the exemption limits in §115.431(a) of this title must be [was reduced is] authorized by a permit, permit amendment, [any permit or permit amendment or] standard permit, or permit by rule required by Chapter 116 of this title (relating to Control of Air Pollution by Permit for New Construction or Modification) or Chapter 106 of this title (relating to Permits by Rule). If a permit by rule is available for the project, the owner or operator shall continue to comply with paragraph (1) of this subsection [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 [if] authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide [owner/operator has given] the executive director 30 days [days'] notice of the project in writing.

(3) Any capture efficiency testing of the capture system must be conducted in accordance with §115.435(a) of this title (relating to Testing Requirements).

(b) In Gregg, Nueces, and Victoria Counties, the owner or operator shall limit the VOC emissions from solvent-containing ink used on each packaging rotogravure, publication rotogravure, flexible package, and flexographic printing line by using one of the following options. [For Gregg, Nueces, and Victoria Counties, no person shall op-

~~erate or allow the operation of a packaging rotogravure, publication rotogravure, or flexographic printing line that uses solvent-containing ink, unless VOC emissions are limited by one of the following:~~]

(1) The owner or operator shall apply [~~application to the substrate of~~] low solvent ink with a volatile fraction containing 25% by volume or less of VOC solvent and 75% by volume or more of water and exempt solvent.[~~;~~]

(2) The owner or operator shall apply [~~application to the substrate of~~] high solids solvent-borne ink containing 60% by volume or more of nonvolatile material (minus water and exempt solvent).[~~; or~~]

(3) The owner or operator shall operate [~~operation of~~] a vapor control system to reduce the VOC emissions from an effective capture system by at least 90% by weight. The design and operation of the capture system for each printing line must be consistent with good engineering practice and must achieve [~~shall be required to provide for~~] an overall control efficiency [~~reduction in VOC~~ emissions], as demonstrated to the satisfaction of the executive director upon request of at least the following weight percentages:

(A) 75% for a publication rotogravure process;

(B) 65% for a packaging rotogravure process; [~~or~~]

(C) 60% for a flexographic printing process; or[~~.~~]

(D) for a flexible package printing process, the overall control efficiency in subparagraph (B) or (C) of this paragraph, depending on the type of press used.

(c) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, the following control requirements apply to each flexible package printing line.

(1) The owner or operator shall limit the VOC emissions from coatings, as defined in §101.1 of this title (relating to Definitions), applied on each flexible package printing line by using one of the following options. These limits are based on the daily weighted average, as defined in §115.430 of this title (relating to Applicability and Definitions).

(A) The owner or operator shall limit the VOC content of the coatings to 0.8 pound of VOC per pound of solids applied. The VOC content limit can be met through the use of low-VOC materials or a combination of low-VOC materials and a vapor control system.

(B) The owner or operator shall limit the VOC content of the coatings to 0.16 pound of VOC per pound of materials applied. The VOC content limit can be met through the use of low-VOC materials or a combination of low-VOC materials and a vapor control system.

(C) The owner or operator shall operate a vapor control system that achieves an overall control efficiency of at least 80% by weight.

(2) A flexographic and rotogravure printing line that become subject to paragraph (1) of this subsection by exceeding of the exemption limits in §115.431(a) of this title is subject to paragraph (1) of this subsection even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with paragraph (1) of this subsection and one of the following conditions is met.

(A) The project that caused throughput or emission rate to fall below the exemption limits in §115.431(a) of this title must be authorized by a permit, permit amendment, standard permit, or permit by rule required by Chapter 116 of this title or Chapter 106 of this title. If a permit by rule is available for the project, the owner or operator shall continue to comply with paragraph (1) of this subsection for 30 days after the filing of documentation of compliance with that permit by rule.

(B) If authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

(3) An owner or operator applying low-VOC coatings in combination with a vapor control system to meet the VOC emission limits in paragraph (1) of this subsection shall use the following equation to determine the minimum overall control efficiency necessary to demonstrate equivalency. Control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.435(a) of this title.

Figure: 30 TAC §115.432(c)(3)

(d) The owner or operator of a flexible package printing process shall implement the following work practices for cleaning materials:

(1) keep all cleaning solvents and used shop towels in closed containers; and

(2) convey cleaning solvents from one location to another in closed containers or pipes.

§115.433. Alternate Control Requirements.

[~~(a)~~] For the owner or operator of a flexographic or rotogravure printing line subject to this division, [~~For all affected 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 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.

[~~(b) For all affected persons in Gregg, Nueces, and Victoria Counties, 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.~~]

§115.435. Testing Requirements.

(a) In the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), [~~For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas,~~] compliance with the control requirements in §115.432 of this title (relating to Control Requirements) must [~~shall~~] be determined by applying the following test methods, as appropriate:

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

(2) [~~Test~~] Method 24 (40 CFR Part 60, Appendix A) for determining the volatile organic compounds [~~compound~~] (VOC) content and density of printing inks and related coatings;

(3) [~~Test~~] Method 25 (40 CFR Part 60, Appendix A) for determining total gaseous nonmethane organic emissions as carbon;

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

(5) the United States Environmental Protection Agency (EPA) [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;

(6) additional performance test procedures described in 40 CFR §60.444 (as amended through October 18, 1983 (48 FR 48375));

(7) minor modifications to these methods and procedures approved by the executive director; and

(8) [(7)] for the capture efficiency, the [which shall be measured using] applicable procedures outlined in 40 CFR [, Part] §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; Procedure F.2 - Fugitive VOC Emissions from Building Enclosures.

(A) The following [are] exemptions apply to capture efficiency testing requirements.

(i) If a source installs a permanent total enclosure [(PTE)] that [which] meets the specifications of Procedure T and that [which] directs all VOC to a control device, then the capture efficiency is assumed to be 100%, and the source is exempt [exempted] from capture efficiency testing requirements. This does not exempt the source from performance of any control device efficiency testing that may be required. In addition, a source must demonstrate all criteria for a permanent total enclosure [PTE] are met during testing for control efficiency.

(ii) If a source uses a control device designed to collect and recover VOC (e.g., carbon adsorption system), an explicit measurement of capture efficiency is not necessary if the following conditions are met. The overall control of the system can be determined by directly comparing the input liquid VOC to the recovered liquid VOC. The general procedure for use in this situation is given in 40 CFR §60.433 (as amended through October 17, 2000 (65 FR 61761)) with the following additional restrictions.

(I) The source must be able to equate solvent usage with solvent recovery on a 24-hour (daily) basis, rather than a 30-day weighted average. This verification must be done within 72 hours following each 24-hour period of the 30-day period specified in 40 CFR §60.433 (as amended through October 17, 2000 (65 FR 61761)).

(II) The solvent recovery system (i.e., capture and control system) must be dedicated to a single process line (e.g., one process line venting to a carbon adsorption system); or if the solvent recovery system controls multiple process lines, the source must be able to demonstrate that the overall control (i.e., the total recovered solvent VOC divided by the sum of liquid VOC input to all process lines venting to the control system) meets or exceeds the most stringent standard applicable for any process line venting to the control system.

(B) The capture efficiency must [shall] be calculated using one of the following four protocols referenced. The owner or operator of any [Any] affected source shall [must] use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the EPA.

(i) Gas/gas method using temporary total enclosure (TTE). The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The following equation must be used to determine the capture efficiency for this protocol. [The capture efficiency equation to be used for this protocol is: CE = Gw / (Gw + Fw), where: CE = capture efficiency, decimal fraction; Gw = mass of VOC captured and delivered to control device using a TTE (use Procedure G.2); Fw = mass of fugitive VOC that escapes from a TTE (use Procedure F.1).]

Figure: 30 TAC §115.435(a)(8)(B)(i)

(ii) Liquid/gas method using TTE. The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The following equation must be used to determine the capture efficiency for this protocol. [The capture efficiency equation to be used for this protocol is: CE = (L - F) / L, where: CE = capture efficiency, decimal fraction; L = mass of liquid VOC input to process (use Procedure L); F = mass of fugitive VOC that escapes from a TTE (use Procedure F.1).]

Figure: 30 TAC §115.435(a)(8)(B)(ii)

(iii) Gas/gas method using the building or room enclosure (BE) in which the affected source is located [as the enclosure (BE)] and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from building enclosure [G and F] are measured while operating only the affected facility. All fans and blowers in the BE must be operating as they would under normal production. The following equation must be used to determine the capture efficiency for this protocol. [The capture efficiency equation to be used for this protocol is: CE = G / (G + Fb), where: CE = capture efficiency, decimal fraction; G = mass of VOC captured and delivered to a control device (use Procedure G.2); Fb = mass of fugitive VOC that escapes from building enclosure (use Procedure F.2).]

Figure: 30 TAC §115.435(a)(8)(B)(iii)

(iv) Liquid/gas method using a BE in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from BE [L and F] are measured while operating only the affected facility. All fans and blowers in the BE [building or room] must be operated as they would under normal production. The following equation must be used to determine the capture efficiency for this protocol. [The capture efficiency equation to be used for this protocol is: CE = (L - Fb) / L, where: CE = capture efficiency, decimal fraction; L = mass of liquid VOC input to process (use Procedure L); Fb = mass of fugitive VOC that escapes from BE (use Procedure F.2)].

Figure: 30 TAC §115.435(a)(8)(B)(iv)

(C) The operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.436(a) of this title (relating to Monitoring and Recordkeeping Requirements) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. The executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test. [The following conditions must be met in measuring capture efficiency.]

[(i) Any error margin associated with a test protocol may not be incorporated into the results of a capture efficiency test.]

[(ii) All affected facilities shall accomplish the initial capture efficiency testing by July 31, 1992, in Brazoria, Dallas, El Paso, Galveston, Harris, Jefferson, Orange, and Tarrant Counties, and by July 31, 1993, in Chambers, Collin, Denton, Fort Bend, Hardin, Liberty, Montgomery, and Waller Counties.]

[(iii) During an initial pretest meeting, the executive director and the source owner or operator shall identify those operating parameters which shall be monitored to ensure that capture efficiency does not change significantly over time. These parameters must shall be monitored and recorded initially during the capture efficiency testing and thereafter during facility operation. The executive director may

~~require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test; and]~~

~~[(8) minor modifications to these test methods and procedures approved by the executive director.]~~

(b) In [~~For~~] Gregg, Nueces, and Victoria Counties, compliance with the requirements in this division must [~~shall~~] be determined by applying the following test methods, as appropriate:

(1) Methods 1 - 4 [~~Test Methods 1-4~~] (40 CFR Part 60, Appendix A) for determining flow rates, as necessary;

(2) [~~Test~~] Method 24 (40 CFR Part 60, Appendix A) for determining the VOC content and density of printing inks and related coatings;

(3) [~~Test~~] Method 25 (40 CFR Part 60, Appendix A) for determining total gaseous nonmethane organic emissions as carbon;

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

(5) the 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;

(6) additional performance test procedures described in 40 CFR §60.444 (as amended through October 18, 1983 (48 FR 48375)); or

(7) minor modifications to these test methods and procedures approved by the executive director.

(c) Methods other than those specified in subsections (a)(1) - (6) and (b)(1) - (6) of this section may be used if approved by the executive director and validated using Method 301 (40 CFR Part 63, Appendix A). For the purposes of this subsection, substitute "executive director" each place that Method 301 references "administrator."

§115.436. Monitoring and Recordkeeping Requirements.

(a) In the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), the owner or operator of a rotogravure or flexographic printing line subject to this division shall: [~~For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the owner or operator of any rotogravure or flexographic printing facility shall:~~]

(1) maintain records of the volatile organic compounds [~~compound~~] (VOC) content of all inks as applied to the substrate. Additionally, records of the quantity of each ink and solvent used must [~~shall~~] be maintained. The composition of inks may be determined by the methods referenced in §115.435(a) of this title (relating to Testing Requirements) or by examining the manufacturer's formulation data and the amount of dilution solvent added to adjust the viscosity of inks prior to application to the substrate;

(2) maintain daily records of the quantity of each ink and solvent used at a facility subject to the requirements of an alternate means of control approved by the executive director in accordance with §115.433 [~~§115.433(a)~~] of this title (relating to Alternate Control Requirements) that [~~which~~] allows the application of inks exceeding the applicable control limits. Such records must be sufficient to demonstrate compliance with the applicable emission limitation on a daily weighted average;

(3) 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 of direct-flame incinerators or [~~and/or~~] gas temperature immediately upstream and downstream of any catalyst bed;

(B) the total amount of VOC recovered by a carbon adsorption or other solvent recovery system during a calendar month;

(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; and

(D) the dates and reasons for any maintenance and repair of the required control devices and the estimated quantity and duration of VOC emissions during such activities;

(4) maintain the results of any testing conducted at an affected facility in accordance with the provisions specified in §115.435(a) of this title [~~(relating to Testing Requirements)~~];

(5) maintain all records at the affected facility for at least two years and make such records available upon request to authorized representatives of the executive director, the United States Environmental Protection Agency (EPA), or any [~~EPA, or the~~] local air pollution agency with [~~having~~] jurisdiction [~~in the area~~]; and

(6) maintain on file the capture efficiency protocol submitted under §115.435(a)(8) [~~§115.435(a)(7)~~] of this title [~~(relating to Testing Requirements)~~]. The owner or operator shall submit all results of the test methods and capture efficiency protocols to the executive director within 60 days of the actual test date. The source owner or operator shall maintain records of the capture efficiency operating parameter values on-site for a minimum of one year. If any changes are made to capture or control equipment, the owner or operator is required to notify the executive director in writing within 30 days of these changes, and a new capture efficiency or [~~and/or~~] control device destruction or removal efficiency test may be required.

(b) In [~~For~~] Gregg, Nueces, and Victoria Counties, the owner or operator of any rotogravure or flexographic printing line [~~facility~~] shall:

(1) maintain records of the VOC content of all inks as applied to the substrate. Additionally, records of the quantity of each ink and solvent used must [~~shall~~] be maintained. The composition of inks may be determined by the methods referenced in §115.435(b) of this title [~~(relating to Testing Requirements)~~] or by examining the manufacturer's formulation data and the amount of dilution solvent added to adjust the viscosity of inks prior to application to the substrate;

(2) maintain daily records of the quantity of each ink and solvent used at a facility subject to the requirements of an alternate means of control approved by the executive director in accordance with §115.433 [~~§115.433(b)~~] of this title that [~~(relating to Alternate Control Requirements) which~~] allows the application of inks exceeding the applicable control limits. Such records must be sufficient to demonstrate compliance with the applicable emission limitation on a daily weighted average;

(3) 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 of direct-flame incinerators or [~~and/or~~] the gas temperature immediately upstream and downstream of any catalyst bed;

(B) the total amount of VOC recovered by a carbon adsorption or other solvent recovery system during a calendar month;

(C) in Victoria County, 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; and

(D) the dates and reasons for any maintenance and repair of the required control devices and the estimated quantity and duration of VOC emissions during such activities;

(4) maintain the results of any testing conducted at an affected facility in accordance with the provisions specified in §115.435(b) of this title [~~(relating to Testing Requirements)~~]; and

(5) maintain all records at the affected facility for at least two years and make such records available upon request to authorized representatives of the executive director, the EPA, or any [~~EPA, or the~~] local air pollution agency with [~~having~~] jurisdiction [~~in the area~~].

(c) Beginning March 1, 2013, in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, the owner or operator of a flexible package printing line subject to this division shall comply with the following monitoring and recordkeeping requirements.

(1) The owner or operator shall maintain records of the VOC content of all coatings, as defined in §101.1 of this title (relating to Definitions), as applied to the substrate. The composition of coatings may be determined by the methods referenced in §115.435(a) of this title or by examining the manufacturer's formulation data and the amount of dilution solvent added to adjust the viscosity of coatings prior to application to the substrate. Additionally, records of the quantity of each coating used must be maintained.

(2) The owner or operator shall maintain records of the quantity and type of each coating and solvent consumed if any of the coatings, as applied, exceed the applicable VOC content limits in §115.432(c) of this title (relating to Control Requirements). Records must be sufficient to demonstrate compliance with the applicable VOC content limit on a daily weighted average.

(3) The owner or operator shall install and maintain monitors to continuously measure and record operational parameters of any control device installed to meet applicable control requirements in §115.432(c) of this title. 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 or gas temperature immediately upstream and downstream of any catalyst bed;

(B) the total amount of VOC recovered by a carbon adsorption or other solvent recovery system during a calendar month;

(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; and

(D) the dates and reasons for any maintenance and repair of the required control devices and the estimated quantity and duration of VOC emissions during such activities.

(4) The owner or operator shall maintain the results of any testing conducted at an affected facility in accordance with the provisions specified in §115.435(a) of this title.

(5) The owner or operator shall maintain all records at the affected facility for at least two years and make such records available upon request to authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction.

(6) The owner or operator shall maintain on file the capture efficiency protocol submitted under §115.435(a)(8) of this title. The owner or operator shall submit all results of the test methods and capture efficiency protocols to the executive director within 60 days of the actual test date. The source owner or operator shall maintain records of the capture efficiency operating parameter values on-site for a minimum of one year. If any changes are made to capture or control equipment, the owner or operator is required to notify the executive director in writing within 30 days of these changes, and a new capture efficiency or control device destruction or removal efficiency test may be required.

§115.439. Counties and Compliance Schedules.

(a) Except as specified in subsection (c) and (d) of this section, for the owner or operator of a flexographic or rotogravure printing line subject to this division [~~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 the compliance date has already passed and the owner or operator shall continue to comply with applicable sections of this division [~~(relating to Flexographic and Rotogravure Printing) as required by §115.930 of this title (relating to Compliance Dates)~~].

(b) Except as specified in subsection (c) and (d) of this section, the owner or operator of a flexographic or rotogravure printing line subject to this division[~~All affected persons~~] in Ellis, Johnson, Kaufman, Parker, and Rockwall Counties shall comply with this division as soon as practicable, but no later than March 1, 2009.

(c) The owner or operator of a flexible package printing line in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), shall comply with the requirements in §115.432(c) and (d) and §115.436(c) of this title (relating to Control Requirements; and Monitoring and Recordkeeping Requirements) no later than March 1, 2013. Testing required by §115.435 of this title (relating to Testing Requirements) to demonstrate compliance with the requirements of §115.432(c) of this title must be completed, and the results submitted to the executive director no later than March 1, 2013.

(d) The owner or operator of a flexible package printing line in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas that becomes subject to the requirements of this division after March 1, 2013, shall comply with the requirements in this division no later than 60 days after becoming subject.

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

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

TRD-201102114
Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
Earliest possible date of adoption: July 24, 2011
For further information, please call: (512) 239-2548

♦ ♦ ♦

30 TAC §115.437

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

Statutory Authority

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

The repeal implements THSC, §§382.002, 382.011, 382.012, and 382.016, 382.017; and FCAA, 42 USC, §§7401 *et seq.*

§115.437. Exemptions.

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

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

TRD-201102115
Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
Earliest possible date of adoption: July 24, 2011
For further information, please call: (512) 239-2548

♦ ♦ ♦

DIVISION 5. CONTROL REQUIREMENTS FOR SURFACE COATING PROCESSES

30 TAC §§115.450, 115.451, 115.453 - 115.455, 115.458, 115.459

Statutory Authority

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

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

§115.450. Applicability and Definitions.

(a) Applicability. In the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions), the requirements in this division apply to the following surface coating processes, except as specified in paragraph (5) of this subsection:

(1) large appliance coating;

(2) metal furniture coating;

(3) miscellaneous metal parts and products coating at the original equipment manufacturer, off-site job shops that coat new parts and products or that recoat used parts and products, and designated on-site maintenance shops that recoat used parts and products;

(4) miscellaneous plastic parts and products coating, pleasure craft coating, and automotive/transportation and business machine plastic parts coating at the original equipment manufacturer and off-site job shops that coat new parts and products or that recoat used parts and products;

(5) motor vehicle materials applied to miscellaneous metal and plastic parts specified in paragraphs (3) and (4) of this subsection, at the original equipment manufacturer and off-site job shops that coat new metal and plastic parts during an operation other than automobile and light-duty truck manufacturing;

(6) paper, film, and foil surface coating lines with the potential to emit from all coatings greater than or equal to 25 tons per year of volatile organic compounds (VOC) when uncontrolled; and

(7) in the Dallas-Fort Worth area, automobile and light-duty truck assembly coating processes conducted by the original equipment manufacturer and operators that conduct automobile and light-duty truck coating processes under contract with the original equipment manufacturer.

(b) General definitions. Unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10 of this title (relating to Definitions), the terms in this division have the meanings commonly used in the field of air pollution control. In addition, the following meanings apply in this division unless the context clearly indicates otherwise.

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

(2) Air-dried coating--A coating that is cured at a temperature below 194 degrees Fahrenheit (90 degrees Celsius). These coatings may also be referred to as low-bake coatings.

(3) Baked Coating--A coating that is cured at a temperature at or above 194 degrees Fahrenheit (90 degrees Celsius). These coatings may also be referred to as high-bake coatings.

(4) 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.

(5) Coating line--An operation consisting of a series of one or more coating application systems and associated flash-off area(s), drying area(s), and oven(s) wherein a surface coating is applied, dried, or cured. The coating line ends at the point the coating is dried or cured, or prior to any subsequent application of a different coating.

(6) Coating solids (or solids)--The part of a coating that remains on the substrate after the coating is dried or cured.

(7) Daily weighted average--The total weight of volatile organic compounds (VOC) emissions from all coatings subject to the same VOC limit in §115.453 of this title (relating to Control Requirements), divided by the total volume or weight of those coatings (minus water and exempt solvent), or divided by the total volume or weight of solids, delivered to the application system on each coating line each day. Coatings subject to different VOC content limits in §115.453 of this title may not be combined for purposes of calculating the daily weighted average.

(8) Multi-component coating--A coating that requires the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film. These coatings may also be referred to as two-component coatings.

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

(10) One-component coating--A coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.

(11) Pounds of volatile organic compounds (VOC) per gallon of coating (minus water and exempt solvents)--The basis for emission limits for surface coating processes that can be calculated by the following equation:
Figure: 30 TAC §115.450(b)(11)

(12) Pounds of volatile organic compounds (VOC) per gallon of solids--The basis for emission limits for surface coating processes that can be calculated by the following equation:
Figure: 30 TAC §115.450(b)(12)

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

(14) Surface coating processes--Operations that use a coating application system.

(c) Specific surface coating definitions. The following meanings apply in this division unless the context clearly indicates otherwise.

(1) Automobile and light-duty truck manufacturing--The following definitions apply to this surface coating category.

(A) Adhesive--Any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

(B) Automobile and light-duty truck adhesive--An adhesive, including glass-bonding adhesive, used in an automobile or light-duty truck assembly coating process and applied for the purpose of bonding two vehicle surfaces together without regard to the substrates involved.

(C) Automobile and light-duty truck bedliner--A multi-component coating used in an automobile or light-duty truck assembly coating process and applied to a cargo bed after the application of topcoat and outside of the topcoat operation to provide additional durability and chip resistance.

(D) Automobile and light-duty truck cavity wax--A coating, used in an automobile or light-duty truck assembly coating process, applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.

(E) Automobile and light-duty truck deadener--A coating used in an automobile or light-duty truck assembly coating process and applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

(F) Automobile and light-duty truck gasket/gasket sealing material--A fluid used in an automobile or light-duty truck assembly coating process and applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light-duty truck gasket/gasket sealing material includes room temperature vulcanization seal material.

(G) Automobile and light-duty truck glass-bonding primer--A primer, used in an automobile or light-duty truck assembly coating process, applied to windshield or other glass, or to body openings, to prepare the glass or body opening for the application of glass-bonding adhesives or the installation of adhesive-bonded glass. Automobile and light-duty truck glass-bonding primer includes glass-bonding/cleaning primers that perform both functions (cleaning and priming of the windshield or other glass, or body openings) prior to the application of adhesive or the installation of adhesive-bonded glass.

(H) Automobile and light-duty truck lubricating wax/compound--A protective lubricating material used in an automobile or light-duty truck assembly coating process and applied to vehicle hubs and hinges.

(I) Automobile and light-duty truck sealer--A high viscosity material used in an automobile or light-duty truck assembly coating process and generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before

the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of automobile and light-duty truck sealer is to fill body joints completely so that there is no intrusion of water, gases, or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk.

(J) Automobile and light-duty truck trunk interior coating--A coating used in an automobile or light-duty truck assembly coating process outside of the primer-surfacer and topcoat operations and applied to the trunk interior to provide chip protection.

(K) Automobile and light-duty truck underbody coating--A coating used in an automobile or light-duty truck assembly coating process and applied to the undercarriage or firewall to prevent corrosion or provide chip protection.

(L) Automobile and light-duty truck weather strip adhesive--An adhesive used in an automobile or light-duty truck assembly coating process and applied to weather-stripping materials for the purpose of bonding the weather-stripping material to the surface of the vehicle.

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

(N) Electrodeposition primer--A process of applying a protective, corrosion-resistant waterborne primer on exterior and interior surfaces that provides thorough coverage of recessed areas. Electrodeposition primer is a dip-coating method that uses an electrical field to apply or deposit the conductive coating onto the part; the object being painted acts as an electrode that is oppositely charged from the particles of paint in the dip tank. Electrodeposition primer is also referred to as E-Coat, Uni-Prime, and ELPO Primer.

(O) Final repair--The operation(s) performed and coating(s) applied to completely assembled motor vehicles or to parts that are not yet on a completely assembled vehicle to correct damage or imperfections in the coating. The curing of the coatings applied in these operations is accomplished at a lower temperature than that used for curing primer-surfacer and topcoat. This lower temperature cure avoids the need to send parts that are not yet on a completely assembled vehicle through the same type of curing process used for primer-surfacer and topcoat and is necessary to protect heat-sensitive components on completely assembled vehicles.

(P) In-line repair--The operation(s) performed and coating(s) applied to correct damage or imperfections in the topcoat on parts that are not yet on a completely assembled vehicle. The curing of the coatings applied in these operations is accomplished at essentially the same temperature as that used for curing the previously applied topcoat. In-line repair is also referred to as high-bake repair or high-bake reprocess. In-line repair is considered part of the topcoat operation.

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

(R) Primer-surfacer--An intermediate protective coating applied over the electrodeposition primer and under the topcoat. Primer-surfacer provides adhesion, protection, and appearance properties to the total finish. Primer-surfacer is also referred to as guide coat or surfacer. Primer-surfacer operations may include other coatings (e.g., anti-chip, lower-body anti-chip, chip-resistant edge primer, spot primer, blackout, deadener, interior color, basecoat replacement coating, etc.) that are applied in the same spray booth(s).

(S) Topcoat--The final coating system applied to provide the final color or a protective finish. The topcoat may be a monocoat color or basecoat/clearcoat system. In-line repair and two-tone are part of topcoat. Topcoat operations may include other coatings (e.g., blackout, interior color, etc.) that are applied in the same spray booth(s).

(T) Solids turnover ratio (RT')--The ratio of total volume of coating solids that is added to the electrodeposition primer system (EDP) in a calendar month divided by the total volume design capacity of the EDP system.

(2) Automotive/transportation and business machine plastic parts--The following definitions apply to this surface coating category.

(A) Adhesion prime--A coating that is applied to a polyolefin part to promote the adhesion of a subsequent coating. An adhesion prime is clearly identified as an adhesion prime or adhesion promoter on its accompanying material safety data sheet.

(B) Black coating--A coating that has a maximum lightness of 23 units and a saturation less than 2.8, where saturation equals the square root of $A^2 + B^2$. These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, maximum lightness is 33 units.

(C) Business machine--A device that uses electronic or mechanical methods to process information, perform calculations, print or copy information, or convert sound into electrical impulses for transmission. This definition includes devices listed in Standard Industrial Classification codes 3572, 3573, 3574, 3579, and 3661 and photocopy machines, a subcategory of Standard Industrial Classification code 3861.

(D) Clear coating--A coating that lacks color and opacity or is transparent and that uses the undercoat as a reflectant base or undertone color.

(E) Coating of plastic parts of automobiles and trucks--The coating of any plastic part that is or will be assembled with other parts to form an automobile or truck.

(F) Coating of plastic parts of business machines--The coating of any plastic part that is or will be assembled with other parts to form a business machine.

(G) Electrostatic prep coat--A coating that is applied to a plastic part solely to provide conductivity for the subsequent application of a prime, a topcoat, or other coating through the use of electrostatic application methods. An electrostatic prep coat is clearly identified as an electrostatic prep coat on its accompanying material safety data sheet.

(H) Flexible coating--A coating that is required to comply with engineering specifications for impact resistance, mandrel bend, or elongation as defined by the original equipment manufacturer.

(I) Fog coat--A coating that is applied to a plastic part for the purpose of color matching without masking a molded-in texture. A fog coat may not be applied at a thickness of more than 0.5 mil of coating solids.

(J) Gloss reducer--A coating that is applied to a plastic part solely to reduce the shine of the part. A gloss reducer may not be applied at a thickness of more than 0.5 mil of coating solids.

(K) Red coating--A coating that meets all of the following criteria:

(i) yellow limit: the hue of hostaperm scarlet;

(ii) blue limit: the hue of monastral red-violet;

(iii) lightness limit for metallics: 35% aluminum flake;

(iv) lightness limit for solids: 50% titanium dioxide white;

(v) solid reds: hue angle of -11 to 38 degrees and maximum lightness of 23 to 45 units; and

(vi) metallic reds: hue angle of -16 to 35 degrees and maximum lightness of 28 to 45 units. These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, the upper limit is 49 units. The maximum lightness varies as the hue moves from violet to orange. This is a natural consequence of the strength of the colorants, and real colors show this effect.

(L) Resist coat--A coating that is applied to a plastic part before metallic plating to prevent deposits of metal on portions of the plastic part.

(M) Stencil coat--A coating that is applied over a stencil to a plastic part at a thickness of 1.0 mil or less of coating solids. Stencil coats are most frequently letters, numbers, or decorative designs.

(N) Texture coat--A coating that is applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating.

(O) Vacuum-metalizing coatings--Topcoats and basecoats that are used in the vacuum-metalizing process.

(3) 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.

(A) Extreme high-gloss coating--A coating which, when tested by the American Society for Testing Material Test Method D-523 adopted in 1980, shows a reflectance of 75 or more on a 60 degree meter.

(B) Extreme performance coating--A coating used on a metal surface where the coated surface is, in its intended use, subject to:

(i) chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;

(ii) repeated exposure to temperatures in excess of 250 degrees Fahrenheit (121 degrees Celsius); or

(iii) repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

(C) Heat-resistant coating--A coating that must withstand a temperature of at least 400 degrees Fahrenheit (204 degrees Celsius) during normal use.

(D) Metallic coating--A coating that contains more than 5.0 grams of metal particles per liter of coating as applied. Metal particles are pieces of a pure elemental metal or a combination of elemental metals.

(E) Pretreatment coating--A coating that contains no more than 12% solids by weight, and at least 0.50% acid, by weight; is used to provide surface etching; and applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

(F) Solar-absorbent coating--A coating that has as its prime purpose the absorption of solar radiation.

(4) Metal furniture coating--The coating of metal furniture including, but not limited, to tables, chairs, wastebaskets, beds, desks, lockers, benches, shelves, file cabinets, lamps, and other metal furniture products or the coating of any metal part that will be a part of a nonmetal furniture product.

(A) Extreme high-gloss coating--A coating which, when tested by the American Society for Testing Material Test Method D-523 adopted in 1980, shows a reflectance of 75 or more on a 60 degree meter.

(B) Extreme performance coating--A coating used on a metal surface where the coated surface is, in its intended use, subject to:

(i) chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;

(ii) repeated exposure to temperatures in excess of 250 degrees Fahrenheit (121 degrees Celsius); or

(iii) repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

(C) Heat-resistant coating--A coating that must withstand a temperature of at least 400 degrees Fahrenheit (204 degrees Celsius) during normal use.

(D) Metallic coating--A coating containing more than 5.0 grams of metal particles per liter of coating as applied. Metal particles are pieces of a pure elemental metal or a combination of elemental metals.

(E) Pretreatment coating--A coating that contains no more than 12% solids by weight, and at least 0.50% acid, by weight; is used to provide surface etching; and applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

(F) Solar-absorbent coating--A coating that has as its prime purpose the absorption of solar radiation.

(5) Miscellaneous metal and plastic parts--The following definitions apply to this surface coating category.

(A) Camouflage coating--A coating used, principally by the military, to conceal equipment from detection.

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

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

(D) Electric-dissipating coating--A coating that rapidly dissipates a high-voltage electric charge.

(E) Electric-insulting varnish--A non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

(F) EMI/RFI shielding--A coating used on electrical or electronic equipment to provide shielding against electromagnetic interference (EMI), radio frequency interference (RFI), or static discharge.

(G) Etching filler--A coating that contains less than 23% solids by weight and at least 0.50% acid by weight and is used instead of applying a pretreatment coating followed by a primer.

(H) Extreme high-gloss coating--A coating which, when tested by the American Society for Testing and Materials Test Method D-523 adopted in 1980, shows a reflectance of 75 or more on a 60 degree meter.

(I) Extreme performance coating--A coating used on a metal or plastic surface where the coated surface is, in its intended use, subject to one of the following conditions. Extreme performance coatings include, but are not limited to, coatings applied to locomotives, railroad cars, farm machinery, and heavy-duty trucks:

(i) chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;

(ii) repeated exposure to temperatures in excess of 250 degrees Fahrenheit (121 degrees Celsius); or

(iii) repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

(J) Heat-resistant coating--A coating that must withstand a temperature of at least 400 degrees Fahrenheit (204 degrees Celsius) during normal use.

(K) High performance architectural coating--A coating used to protect architectural subsections and meets the requirements of the American Architectural Manufacturers Association's publication number AAMA 2604-05 (Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels) or 2605-05 (Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels).

(L) High temperature coating--A coating that is certified to withstand a temperature of 1000 degrees Fahrenheit (538 degrees Celsius) for 24 hours.

(M) Mask coating--A thin film coating applied through a template to coat a small portion of a substrate.

(N) Metallic coating--A coating containing more than 5.0 grams of metal particles per liter of coating as applied. Metal particles are pieces of a pure elemental metal or a combination of elemental metals.

(O) Military specification coating--A coating that has a formulation approved by a United States Military Agency for use on military equipment.

(P) Mold-seal coating--The initial coating applied to a new mold or a repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.

(Q) Miscellaneous metal parts and products--Parts and products considered miscellaneous metal 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 that 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) - (4) and (6) - (8) of this subsection.

(R) Multi-colored coating--A coating that exhibits more than one color when applied packaged in a single container and applied in a single coat.

(S) Off-site job shop--A non-manufacturer of metal or plastic parts and products that applies coatings to such products at a site exclusively under contract with one or more parties that operate under separate ownership and control.

(T) Optical coating--A coating applied to an optical lens.

(U) Pail (metal)--Any cylindrical metal shipping container with a 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.

(V) Pan-backing coating--A coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

(W) Prefabricated architectural component coating--A coating applied to metal parts and products that are to be used as an architectural structure.

(X) Pretreatment coating--A coating that contains no more than 12% solids by weight, and at least 0.50% acid, by weight; is used to provide surface etching; and applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

(Y) Repair coating--A coating used to re-coat portions of a previously coated product that has sustained mechanical damage to the coating following normal coating operations.

(Z) Shock-free coating--A coating applied to electrical components to protect the user from electric shock. The coating has characteristics of being low-capacitance and high-resistance and having resistance to breaking down under high voltage.

(AA) Silicone-release coating--A coating that contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.

(BB) Solar-absorbent coating--A coating that has as its prime purpose the absorption of solar radiation.

(CC) Stencil coating--A pigmented coating or ink that is rolled or brushed onto a template or stamp in order to add identifying letters, symbols, or numbers.

(DD) Touch-up coating--A coating used to cover minor coating imperfections appearing after the main coating operation.

(EE) Translucent coating--A coating that contains binders and pigment and formulated to form a colored, but not opaque, film.

(FF) Vacuum-metalizing coating--The undercoat applied to the substrate on which the metal is deposited or the overcoat

applied directly to the metal film. Vacuum metalizing or physical vapor deposition is the process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

(6) Motor vehicle materials--The following definitions apply to this surface coating category.

(A) Motor vehicle bedliner--A multi-component coating, used in a process that is not an automobile or light-duty truck manufacturing assembly coating process, applied to a cargo bed after the application of topcoat to provide additional durability and chip resistance.

(B) Motor vehicle cavity wax--A coating used in a process that is not an automobile or light-duty truck assembly coating process and applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.

(C) Motor vehicle deadener--A coating used in a process that is not an automobile or light-duty truck assembly coating process and applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

(D) Motor vehicle gasket/sealing material--A fluid used in a process that is not an automobile or light-duty truck assembly coating process and applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light-duty truck gasket/gasket sealing material includes room temperature vulcanization seal material.

(E) Motor vehicle lubricating wax/compound--A protective lubricating material used in a process that is not an automobile or light-duty truck assembly coating process and applied to vehicle hubs and hinges.

(F) Motor vehicle sealer--A high viscosity material used in a process that is not an automobile or light-duty truck assembly coating process and generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of automobile and light-duty truck sealer is to fill body joints completely so that there is no intrusion of water, gases, or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk.

(G) Motor vehicle trunk interior coating--A coating used in a process that is not an automobile or light-duty truck assembly coating process and applied to the trunk interior to provide chip protection.

(H) Motor vehicle underbody coating--A coating used in a process that is not an automobile or light-duty truck assembly coating process and applied to the undercarriage or firewall to prevent corrosion or provide chip protection.

(7) Paper, film, and foil coating--The coating of paper and pressure-sensitive tapes (regardless of substrate and including paper, fabric, and plastic film), related web coating processes on plastic film (including typewriter ribbons, photographic film, and magnetic tape), metal foil (including decorative, gift wrap, and packaging), industrial and decorative laminates, abrasive products (including fabric coated for use in abrasive products), and flexible packaging. Paper, film, and foil coating includes the application of a continuous layer of a coating material across the entire width or any portion of the width of a paper, film, or foil web substrate to: provide a covering, finish, or functional or protective layer to the substrate; saturate the substrate for lamination; or provide adhesion between two substrates for lamination. Paper, film, and foil coating does not include coating performed on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press. In addition, size presses and on-machine coaters that function as part of an in-line papermaking system are not included.

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

(A) Antifoulant coating--Any coating applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms, and registered with the United States Environmental Protection Agency as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code, §136).

(B) Extreme high-gloss coating--Any coating that achieves at least 95% reflectance on a 60 degree meter when tested by American Society for Testing and Materials Method D 523-89.

(C) Finish primer-surfacer--A coating applied with a wet film thickness less than 10 mils prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier, or promotion of a uniform surface necessary for filling in surface imperfections.

(D) High-build primer-surfacer--A coating applied with a wet film thickness of 10 mils or more prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, or a moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections.

(E) High-gloss coating--Any coating that achieves at least 85% reflectance on a 60 degree meter when tested by American Society for Testing and Materials Test Method D 523-89.

(F) Pleasure craft coating--Any marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.

(G) Pretreatment wash primer--A coating that contains no more than 12% solids by weight and at least 0.50% acids by weight; used to provide surface etching; and applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings.

(H) Topcoat--Any final coating applied to the interior or exterior of a pleasure craft.

§115.451. Exemptions.

The following exemptions apply to the owner or operator of a surface coating process subject to this division.

(1) Excluded from the volatile organic compounds (VOC) emission calculations are coatings and solvents used in coating activities and associated cleaning operations not addressed by the surface coating categories in §115.421(a)(3), (5) - (8)(A), and (10) - (15) or §115.453 of this title (relating to Emission Specifications and Control Requirements, respectively). For example, architectural coatings applied in the field to stationary structures and their appurtenances, portable buildings, pavements, or curbs at a property would not be included in the calculations.

(A) All surface coating processes on a property that, when uncontrolled, will emit a combined weight of VOC of less than 3.0 pounds per hour and 15 pounds in any consecutive 24-hour period are exempt from §115.453 of this title.

(B) Surface coating processes on a property that, when uncontrolled, will emit a combined weight of VOC of less

than 100 pounds in any consecutive 24-hour period are exempt from §115.453(a) of this title if documentation is provided to and approved by both the executive director and the United States Environmental Protection Agency to demonstrate that necessary coating performance criteria cannot be achieved with coatings that satisfy applicable VOC limits and that control equipment is not technologically or economically feasible.

(C) Surface coating processes on a property where total coating and solvent usage does not exceed 150 gallons in any consecutive 12-month period are exempt from the VOC limits in §115.453(a) of this title.

(2) The following surface coating processes are exempt from the VOC limits in §115.453(a)(1)(C) - (F) and (2) of this title:

(A) large appliance coating;

(B) metal furniture coating; and

(C) automobile and light-duty truck assembly coating.

(3) Paper, film, and foil coating processes are exempt from the coating application system requirements in §115.453(c) of this title and the coating use work practice requirements in §115.453(d)(1) of this title.

(4) Automobile and light-duty truck assembly coating processes are exempt from the coating application system requirements in §115.453(c) of this title and the cleaning-related work practice requirements in §115.453(d)(2) of this title.

(5) Automobile and light-duty truck assembly coating materials supplied in containers with a net volume of 16 ounces or less, or a net weight of 1.0 pound or less, are exempt from the VOC limits in Table 2 in §115.453(a)(3) of this title.

(6) The following miscellaneous metal part and product surface coatings and coating operations are exempt from the coating application system requirements in §115.453(c) of this title:

(A) touch-up coatings, repair coatings, and textured finishes;

(B) stencil coatings;

(C) safety-indicating coatings;

(D) solid-film lubricants;

(E) electric-insulating and thermal-conducting coatings;

(F) magnetic data storage disk coatings; and

(G) plastic extruded onto metal parts to form a coating.

(7) All miscellaneous plastic part airbrush coatings and coating operations where total coating usage is less than 5.0 gallons per year are exempt from the coating application system requirements in §115.453(c) of this title.

(8) The application of extreme high-gloss coatings to pleasure craft is exempt from the coating application system requirements in §115.453(c) of this title.

(9) The following miscellaneous plastic parts coatings and coating operations are exempt from the coating VOC limits in §115.453(a)(1)(D) of this title:

(A) touch-up and repair coatings;

(B) stencil coatings applied on clear or transparent substrates;

(C) clear or translucent coatings;

(D) any individual coating type used in volumes less than 50 gallons in any one year, if substitute compliant coatings are not available, provided that the total usage of all such coatings does not exceed 200 gallons per year, per facility;

(E) reflective coating applied to highway cones;

(F) mask coatings that are less than 0.5 mil thick dried and the area coated is less than 25 square inches;

(G) electromagnetic interference/radio frequency interference shielding coatings; and

(H) heparin-benzalkonium chloride-containing coatings applied to medical devices, if the total usage of all such coatings does not exceed 100 gallons per year, per facility.

(10) The following automotive/transportation and business machine plastic part coatings and coating processes are exempt from the VOC limits in §115.453(a)(1)(F) of this title:

(A) texture coatings;

(B) vacuum-metalizing coatings;

(C) gloss reducers;

(D) texture topcoats;

(E) adhesion prime;

(F) electrostatic preparation coatings;

(G) resist coatings; and

(H) stencil coatings.

(11) Powder coatings applied during metal and plastic parts surface coating processes are exempt from the requirements in this division, except as specified in §115.458(b)(5) of this title (relating to Monitoring and Recordkeeping Requirements).

(12) Aerosol coatings (spray paint) are exempt from this division.

(13) Coatings applied to test panels and coupons as part of research and development, quality control, or performance testing activities at paint research or manufacturing facilities are exempt from the requirements in this division.

§115.453. Control Requirements.

(a) The following control requirements apply to surface coating processes subject to this division. Except as specified in paragraph (3) of this subsection, these limitations are based on the daily weighted average of all coatings, as defined in §101.1 of this title (relating to Definitions).

(1) The owner or operator shall not apply coatings that exceed the volatile organic compounds (VOC) limits for each of the coating categories in this paragraph. The limits must be met by applying low-VOC coatings to meet the specified VOC content limits on a pound of VOC per gallon of coating basis (lb VOC/gal coating), as delivered to the application system (minus water and exempt solvent), or by applying low-VOC coatings in combination with a vapor control system, as defined in §115.10 (relating to Definitions), to meet the specified VOC emission limits on a pound of VOC per gallon of solids basis (lb VOC/gal solids).

(A) Large appliances. If a coating does not meet a specific coating type definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.
Figure: 30 TAC §115.453(a)(1)(A)

(B) Metal furniture. If a coating does not meet a specific coating type definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.
Figure: 30 TAC §115.453(a)(1)(B)

(C) Miscellaneous metal parts and products. If a coating does not meet a specific coating type definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.
Figure: 30 TAC §115.453(a)(1)(C)

(D) Miscellaneous plastic parts and products. If a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating and the VOC limit for general coating applies.
Figure: 30 TAC §115.453(a)(1)(D)

(E) Automotive/transportation and business machine plastic parts. For red, yellow, and black automotive/transportation coatings, except touch-up and repair coatings, the VOC limit is determined by multiplying the appropriate limit in Table 1 of this subparagraph by 1.15.
Figure: 30 TAC §115.453(a)(1)(E)

(F) Pleasure craft. If a coating does not meet a specific coating category definition, then it can be assumed to be a general-use coating and the VOC limits for other coatings applies.
Figure: 30 TAC §115.453(a)(1)(F)

(2) The owner or operator shall not apply motor vehicle materials to the metal and plastic parts in paragraph (1)(C) - (F) of this subsection, that exceed the following limits, as delivered to the application system.
Figure: 30 TAC §115.453(a)(2)

(3) The owner or operator shall not apply coatings that exceed the following VOC limits during automobile and light-duty truck assembly coating.
Figure: 30 TAC §115.453(a)(3)

(A) The owner or operator shall determine compliance with the VOC limits for electrodeposition primer operations on a monthly weighted average in accordance with §115.455(a)(2)(D) of this title (relating to Approved Test Methods and Testing Requirements).

(B) As an alternative to the VOC limit in Table 1 of this paragraph for final repair coatings, if an owner or operator does not compile records sufficient to enable determination of a daily weighted average VOC content, compliance may be demonstrated each day by meeting a standard of 4.8 lb VOC/gal coating (minus water and exempt solvents) on an occurrence weighted average basis. Compliance with the VOC limits on an occurrence weighted average basis must be determined in accordance with the procedure specified in §115.455(a)(2) of this title.

(C) The owner or operator shall determine compliance with the VOC content limits in Table 2 of this paragraph in accordance with §115.455(a)(1) or (2)(C) of this title, as appropriate.

(4) The owner or operator of paper, film, and foil coating lines shall not apply coatings that exceed the following limits. The limits may be met by applying low-VOC coatings to meet the specified VOC content limits on a pound of VOC per pound of coating basis, as delivered to the application system, or by applying low-VOC coatings in combination with a vapor control system to meet the specified VOC emission limits on a pound of VOC per pound of solids basis.
Figure: 30 TAC §115.453(a)(4)

(5) An owner or operator applying low-VOC coatings in combination with a vapor control system to meet the VOC emission limits in paragraph (1) or (4) of this subsection shall use the following equation to determine the minimum overall control efficiency necessary to demonstrate equivalency. Control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.455(a)(3) and (4) of this title.
Figure: 30 TAC §115.453(a)(5)

(b) Except for the surface coating process in subsection (a)(2) of this section, the owner or operator of a surface coating process may operate a vapor control system capable of achieving a 90% overall control efficiency, as an alternative to subsection (a) of this section. Control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.455(a)(3) and (4) of this title. If the owner or operator complies with the overall control efficiency option under this subsection, then the owner or operator is exempt from the application system requirements of subsection (c) of this section.

(c) The owner or operator of any surface coating process subject to this division shall not apply coatings unless one of the following coating application systems is used:

(1) electrostatic application;

(2) high-volume, low-pressure (HVLP) spray;

(3) flow coat;

(4) roller coat;

(5) dip coat;

(6) brush coat; or

(7) other coating application system capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spray. For the purpose of this requirement, the transfer efficiency of HVLP spray is assumed to be 65%.

(d) The following work practices apply to the owner or operator of each surface coating process subject to this division.

(1) For all coating-related activities including, but not limited to, solvent storage, mixing operations, and handling operations for coatings and coating-related waste materials, the owner or operator shall:

(A) store all VOC-containing coatings and coating-related waste materials in closed containers;

(B) minimize spills of VOC-containing coatings;

(C) convey all coatings in closed containers or pipes;

(D) close mixing vessels and storage containers that contain VOC coatings and other materials except when specifically in use;

(E) clean up spills immediately; and

(F) for automobile and light-duty truck assembly coating processes, minimize VOC emissions from the cleaning of storage, mixing, and conveying equipment.

(2) For all cleaning-related activities including, but not limited to, waste storage, mixing, and handling operations for cleaning materials, the owner or operator shall:

(A) store all VOC-containing cleaning materials and used shop towels in closed containers;

(B) ensure that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials;

(C) minimize spills of VOC-containing cleaning materials;

(D) convey VOC-containing cleaning materials from one location to another in closed containers or pipes;

(E) minimize VOC emissions from cleaning of storage, mixing, and conveying equipment;

(F) clean up spills immediately; and

(G) for metal and plastic parts coating processes specified in §115.450(a)(3) - (5) of this title (relating to Applicability and Definitions), minimize VOC emission from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(3) The owner or operator of automobile and light-duty truck assembly coating processes shall implement a work practice plan containing procedures to minimize VOC emissions from cleaning activities and purging of coating application equipment. Properties with a work practice plan already in place to comply with requirements specified in 40 Code of Federal Regulations (CFR) §63.3094(b) (as amended through April 20, 2006 (71 FR 20464)), may incorporate procedures for minimizing non-hazardous air pollutant VOC emissions to comply with the work practice plan required by this paragraph.

(e) A surface coating process that becomes subject to subsection (a) of this section by exceeding the exemption limits in §115.451 of this title (relating to Exemptions) is subject to the provisions in subsection (a) of this section even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with subsection (a) of this section and one of the following conditions is met.

(1) The project that caused throughput or emission rate to fall below the exemption limits in §115.451 of this title must be authorized by a permit, permit amendment, standard permit, or permit by rule required by Chapters 106 or 116 of this title (relating to Permits by Rule; and Control of Air Pollution by Permits for New Construction or Modification, respectively). If a permit by rule is available for the project, the owner or operator shall continue to comply with subsection (a) of this section for 30 days after the filing of documentation of compliance with that permit by rule.

(2) If authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

§115.454. Alternate Control Requirements.

(a) For the owner or operator of a surface coating process subject to this division, 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.

(b) For any surface coating process or processes at a specific property, the executive director may approve requirements different from those in §115.453(a)(1)(A) of this title (relating to Control Requirements) based upon the executive director's determination that such requirements will result in the lowest emission rate that is technologically and economically reasonable. When the executive director makes such a determination, the executive director shall specify the date or dates by which such different requirements must be met and shall specify any requirements to be met in the interim. If the emissions resulting from such different requirements equal or exceed 25 tons a year for a property, the determinations for that property must be reviewed every five years. Executive director approval does not necessarily constitute satisfaction of all federal requirements nor eliminate the need for approval by the United States Environmental Protection Agency in cases where specified criteria for determining equivalency have not been clearly identified in applicable sections of this chapter.

§115.455. Approved Test Methods and Testing Requirements.

(a) Approved Test Methods and Testing Requirements. Compliance with the requirements in this division must be determined by applying one or more of the following test methods, as appropriate. As an alternative to the test methods in paragraph (1) of this subsection, the volatile organic compounds (VOC) content of coatings may be determined by using analytical data from the coating and, if necessary dilution solvent, material safety data sheets (MSDS).

(1) The owner or operator shall demonstrate compliance with the VOC limits in §115.453 of this title (relating to Control Requirements), by applying the following test methods, as appropriate. Where a test method also inadvertently measures compounds that are exempt solvents, an owner or operator may exclude these exempt solvents when determining compliance with a VOC limit. The methods include:

(A) Method 24 (40 Code of Federal Regulations (CFR) Part 60, Appendix A);

(B) American Society for Testing and Materials (ASTM) Test Methods D 1186-06.01, D 1200-06.01, D 3794-06.01, D 2832-69, D 1644-75, and D 3960-81;

(C) the United States Environmental Protection Agency (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;

(D) additional test procedures described in 40 CFR §60.446 (as amended through October 17, 2000 (65 FR 61761)); and

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

(2) The owner or operator shall determine compliance with the VOC limits in §115.453(a)(3) of this title by applying the following test methods in addition to paragraph (1) of this subsection, as appropriate. The methods include:

(A) Protocol for Determining the Daily VOC Emission Rate of Automobile and Light-Duty Truck Topcoat Operations (EPA-453/R-08-002);

(B) the procedure contained in subparagraph (A) of this paragraph for determining daily compliance with the alternative emission limitation in §115.453(a)(3) of this title for final repair. Calculation of occurrence weighted average for each combination of repair coatings (primer, specific basecoat, clearcoat) must be determined by the following procedure;

(i) the relative occurrence weighted usage calculated as follows for each repair material:
Figure: 30 TAC §115.455(a)(2)(B)(i)

(ii) the occurrence weighted average (Q) in pounds of volatile organic compounds (VOC) per gallon of coating (minus wa-

ter and exempt solvents) as applied, for each potential combination of repair coatings calculated according to this subparagraph;
Figure: 30 TAC §115.455(a)(2)(B)(ii)

(C) the procedure contained in 40 CFR Part 63, Subpart PPPP, Appendix A (as amended through April 24, 2007 (72 FR 20237)), for reactive adhesives; and

(D) the procedure contained in 40 CFR Part 60, Subpart MM (as amended October 17, 2000 (65 FR 61760)) for determining the monthly weighted average for electrodeposition primer.

(3) The owner or operator shall determine compliance with the vapor control system requirements in §115.453 of this title by applying the following test methods, as appropriate:

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

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

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

(D) additional performance test procedures described in 40 CFR §60.444 (as amended through October 18, 1983 (48 FR 48375)); or

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

(4) The owner or operator of a surface coating process subject to §115.453 of this title shall measure the capture efficiency using applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; and Procedure F.2 - Fugitive VOC Emissions from Building Enclosures.

(A) The following exemptions apply to capture efficiency testing requirements.

(i) If a source installs a permanent total enclosure that meets the specifications of Procedure T and that directs all VOC to a control device, then the capture efficiency is assumed to be 100%, and the source is exempted from capture efficiency testing requirements. This does not exempt the source from performance of any control device efficiency testing that may be required. In addition, a source must demonstrate all criteria for a permanent total enclosure are met during testing for control efficiency.

(ii) If a source uses a vapor control system designed to collect and recover VOC (e.g., carbon adsorption system), an explicit measurement of capture efficiency is not necessary if the following conditions are met. The overall control of the system can be determined by directly comparing the input liquid VOC to the recovered liquid VOC. The general procedure for use in this situation is given in 40 CFR §60.433 (as amended through October 17, 2000 (65 FR 61761)), with the following additional restrictions.

(I) The source must be able to equate solvent usage with solvent recovery on a 24-hour (daily) basis, rather than a 30-day weighted average. This verification must be done within 72 hours following each 24-hour period of the 30-day period.

(II) The solvent recovery system (i.e., capture and control system) must be dedicated to a single process line (e.g., one process line venting to a carbon adsorber system); or if the solvent recovery system controls multiple process lines, the source must be able to demonstrate that the overall control (i.e., the total recovered solvent VOC divided by the sum of liquid VOC input to all process lines venting to the control system) meets or exceeds the most stringent standard applicable for any process line venting to the control system.

(B) The capture efficiency must be calculated using one of the following protocols referenced. Any affected source must use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the EPA.

(i) Gas/gas method using temporary total enclosure (TTE). The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.455(a)(4)(B)(i)

(ii) Liquid/gas method using TTE. The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.455(a)(4)(B)(ii)

(iii) Gas/gas method using the building or room enclosure (BE) in which the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from BE are measured while operating only the affected facility. All fans and blowers in the BE must be operating as they would under normal production. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.455(a)(4)(B)(iii)

(iv) Liquid/gas method using a BE in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from BE are measured while operating only the affected facility. All fans and blowers in the building or room must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.455(a)(4)(B)(iv)

(C) The operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.458(a) of this title (relating to Monitoring and Recordkeeping Requirements) must be monitored and recorded during the initial capture efficiency test and thereafter during facility operation. The executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test.

(5) Test methods other than those specified in paragraphs (1) - (4) of this subsection may be used if approved by the executive director and validated by Method 301 (40 CFR Part 63, Appendix A). For the purposes of this paragraph, substitute "executive director" each place that Method 301 references "administrator."

(b) Inspection requirements. The owner or operator of each surface coating process subject to §115.453 of this title shall provide samples, without charge, upon request by authorized representatives of the executive director, the EPA, or any local air pollution agency with jurisdiction. The representative or inspector requesting the sample will determine the amount of coating needed to test the sample to determine compliance.

§115.458. Monitoring and Recordkeeping Requirements.

(a) Monitoring requirements. The following monitoring requirements apply to the owner or operator of a surface coating process subject to this division that uses a vapor control system in accordance with §115.453 of this title (relating to Control Requirements). The

owner or operator shall install and maintain monitors to accurately measure and record operational parameters of all required control devices, as necessary, to ensure the proper functioning of those devices in accordance with design specifications, including:

(1) continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed;

(2) the total amount of volatile organic compounds (VOC) recovered by carbon adsorption or other solvent recovery systems during a calendar month;

(3) continuous monitoring of carbon adsorption bed exhaust; and

(4) appropriate operating parameters for capture systems and control devices other than those specified in paragraphs (1) - (3) of this subsection.

(b) Recordkeeping requirements. The following recordkeeping requirements apply to the owner or operator of a surface coating process subject to this division.

(1) The owner or operator shall maintain records of the testing data or the material safety data sheets (MSDS) in accordance with the requirements in §115.455(a) of this title (relating to Approved Test Methods and Testing Requirements). The MSDS must document relevant information regarding each coating and solvent available for use in the affected surface coating processes including the VOC content, composition, solids content, and solvent density. Records must be sufficient to demonstrate continuous compliance with the VOC limits in §115.453(a) of this title.

(2) Records must be maintained of the quantity and type of each coating and solvent consumed during the specified averaging period if any of the coatings, as delivered to the coating application system, exceed the applicable VOC limits. Such records must be sufficient to calculate the applicable weighted average of VOC content for all coatings.

(3) As an alternative to the recordkeeping requirements of paragraph (2) of this subsection, the owner or operator that qualifies for exemption under §115.451(1)(C) of this title (relating to Exemptions) may maintain records of the total gallons of coating and solvent used in each month and total gallons of coating and solvent used in the previous 12 months.

(4) The owner or operator shall maintain, on file, the capture efficiency protocol submitted under §115.455(a)(4) of this title. The owner or operator shall submit all results of the test methods and capture efficiency protocols to the executive director within 60 days of the actual test date. The owner or operator shall maintain records of the capture efficiency operating parameter values on-site for a minimum of one year. If any changes are made to capture or control equipment, the owner or operator is required to notify the executive director in writing within 30 days of these changes and a new capture efficiency or control device destruction or removal efficiency test may be required.

(5) The owner or operator claiming an exemption in §115.451 of this title shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria.

(6) Except for specialty coatings, compliance with the recordkeeping requirements of 40 Code of Federal Regulations §63.752 (as amended through September 1, 1998 (63 FR 46534)) (National Emission Standards for Aerospace Manufacturing and Rework Facilities), is considered to represent compliance with the requirements of this section.

(7) Records must be maintained of any testing conducted in accordance with the provisions specified in §115.455(a) of this title.

(8) Records must be maintained a minimum of two years and be made available upon request to authorized representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution agency with jurisdiction.

§115.459. Compliance Schedules.

(a) The owner or operator of a surface coating process subject to this division shall comply with the requirements of this division no later than March 1, 2013.

(b) The owner or operator of each surface coating process that becomes subject to this division on or after the date specified in subsection (a) of this section, shall comply with the requirements in this division no later than 60 days after becoming subject.

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

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

TRD-201102116
Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
Earliest possible date of adoption: July 24, 2011
For further information, please call: (512) 239-2548

♦ ♦ ♦

DIVISION 6. INDUSTRIAL CLEANING SOLVENTS

30 TAC §§115.460, 115.461, 115.463 - 115.465, 115.468, 115.469

Statutory Authority

The new sections are proposed under Texas Water Code (TWC), §5.102, concerning General Powers, that provides the commission with the general powers to carry out its duties under the TWC; TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC; TWC, §5.105, concerning General Policy, that authorizes the commission by rule to establish and approve all general policy of the commission; and under Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The new sections are also proposed under THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the proper control of the state's air. The new sections are also proposed under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, that authorizes the commission to prescribe reasonable requirements for the measuring and monitoring of air contaminant emissions; and §382.021, concerning Sampling Methods and Procedures, that authorizes the commission to prescribe the sampling methods and procedures to determine compliance with its rules. The new

sections are also proposed under Federal Clean Air Act (FCAA), 42 United States Code (USC), §§7401, *et seq.*, which requires states to submit state implementation plan revisions that specify the manner in which the National Ambient Air Quality Standards will be achieved and maintained within each air quality control region of the state.

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

§115.460. Applicability and Definitions.

(a) Applicability. Except as specified in §115.461 of this title (relating to Exemptions), the requirements in this division apply to solvent cleaning operations in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions). Residential cleaning is not considered a solvent cleaning operation.

(b) Definitions. Unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10 of this title (relating to Definitions), the terms in this division have the meanings commonly used in the field of air pollution control. In addition, the following meanings apply in this division unless the context clearly indicates otherwise.

(1) Aerosol can--A hand-held, non-refillable container that expels pressurized product by means of a propellant-induced force.

(2) Electrical and electronic components--Components and assemblies of components that generate, convert, transmit, or modify electrical energy. Electrical and electronic components include, but are not limited to, wires, windings, stators, rotors, magnets, contacts, relays, printed circuit boards, printed wire assemblies, wiring boards, integrated circuits, resistors, capacitors, and transistors. Cabinets that house electrical and electronic components are not considered electrical and electronic components.

(3) Janitorial cleaning--The cleaning of building or building components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, bathrooms, furnishings, and exterior surfaces of office equipment, excluding the cleaning of work areas where manufacturing or repair activity is performed.

(4) Magnet wire--Wire used in electromagnetic field application in electrical machinery and equipment such as transformers, motors, generators, and magnetic tape recorders.

(5) Magnet wire coating operation--The process of applying insulation coatings such as varnish or enamel on magnet wire where wire is continuously drawn through a coating applicator.

(6) Medical device--An instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar article, including any component or accessory that is, intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of diseases; intended to affect the structure or any function of the body; or defined in the National Formulary or the United States Pharmacopoeia or any supplement to it.

(7) Medical device and pharmaceutical preparation operations--Medical devices, pharmaceutical products, and associated manufacturing and product handling equipment and material, work surfaces, maintenance tools, and room surfaces that are subject to the United States Federal Drug Administration current Good Manufacturing/Laboratory Practice, or Center for Disease Control or National Institute of Health guidelines for biological disinfection of surfaces.

(8) Polyester resin operation--The fabrication, rework, repair, or touch-up of composite products for commercial, military, or industrial uses by mixing, pouring, manual application, molding, impregnating, injecting, forming, spraying, pultrusion, filament winding, or centrifugally casting with polyester resins.

(9) Precision optics--The optical elements used in electro-optical devices that are designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes of light energy levels.

(10) Solvent cleaning operation--The removal of uncured adhesives, inks, and coatings; and contaminants such as dirt, soil, oil, and grease from parts, products, tools, machinery, equipment, vessels, floors, walls, and other work production-related areas.

§115.461. Exemptions.

(a) Solvent cleaning operations located on a property with total actual volatile organic compounds (VOC) emissions of less than 3.0 tons per calendar year from all cleaning solvents, when uncontrolled, are exempt from the requirements of this division, except as specified in §115.468(b)(2) of this title (relating to Monitoring and Recordkeeping Requirements).

(b) The owner or operator of any process or operation subject to another division of this chapter that specifies solvent cleaning operation requirements related to that process or operation is exempt from the requirements in this division.

(c) The following are exempt from the VOC limits in §115.463(1) of this title (relating to Control Requirements):

(1) electrical and electronic components;

(2) precision optics;

(3) numisimatic dies;

(4) resin mixing, molding, and application equipment;

(5) coating, ink, and adhesive mixing, molding, and application equipment;

(6) stripping of cured inks, cured adhesives, and cured coatings;

(7) research and development laboratories;

(8) medical device or pharmaceutical preparation operations;

(9) performance or quality assurance testing of coatings, inks, or adhesives;

(10) architectural coating manufacturing and application operations;

(11) magnet wire coating operations;

(12) semiconductor wafer fabrication;

(13) coating, ink, and adhesive manufacturing;

(14) polyester resin operations;

(15) flexographic and rotogravure printing;

(16) screen printing; and

(17) digital printing.

(d) Cleaning solvents supplied in aerosol cans are exempt from the VOC limits in §115.463(1) of this title if total use for the property is less than 160 fluid ounces per day.

§115.463. Control Requirements.

The following control requirements apply to the owner or operator of a solvent cleaning operation subject to this division.

(1) The owner or operator shall limit the volatile organic compounds (VOC) content of cleaning solutions to:

(A) 0.42 pound of VOC per gallon of solution (lb VOC/gal solution), as applied; or

(B) limit the composite partial vapor pressure of the cleaning solution to 8.0 millimeters of mercury at 68 degrees Fahrenheit (20 degrees Celsius).

(2) As an alternative to paragraph (1) of this section, the owner or operator shall operate a vapor control system capable of achieving an overall control efficiency of 85% by mass. Control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.465 of this title (relating to Approved Test Methods and Testing Requirements).

(3) The owner or operator of a solvent cleaning operation shall implement the following work practices during the handling, storage, and disposal of cleaning solvents and shop towels:

(A) cover open containers and used applicators;

(B) minimize air circulation around solvent cleaning operations;

(C) properly dispose of used solvent and shop towels; and

(D) implement equipment practices that minimize emissions (e.g. maintaining cleaning equipment to repair solvent leaks).

(4) A solvent cleaning operation that becomes subject to paragraph (1) of this section by exceeding the exemption limits in §115.461 of this title (relating to Exemptions) is subject to the provisions in paragraph (1) of this section even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with paragraph (1) of this section and one of the following conditions is met.

(A) The project that caused throughput or emission rate to fall below the exemption limits in §115.461 of this title must be authorized by a permit, permit amendment, 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, the owner or operator shall continue to comply with paragraph (1) of this section for 30 days after the filing of documentation of compliance with that permit by rule.

(B) If authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

§115.464. Alternate Control Requirements.

For cleaning solvent operations subject to §115.463 of this title (relating to 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.

§115.465. Approved Test Methods and Testing Requirements.

The owner or operator shall demonstrate compliance with the control requirements in §115.463 of this title (relating to Control Requirements) by applying the following test methods, as appropriate. Where a test method also inadvertently measures compounds that are exempt solvents, an owner or operator may exclude these exempt solvents when determining compliance with a volatile organic compounds (VOC) content limit.

(1) Compliance with the VOC content limits in §115.463(1) of this title must be determined by using Method 24 (40 Code of Federal Regulations (CFR) Part 60, Appendix A). As an alternative to Method 24, compliance with the VOC content limits in §115.463(1) of this title may be determined by using analytical data from the material safety data sheet.

(2) The owner or operator subject to §115.463(2) of this title shall measure the capture efficiency using applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; and Procedure F.2 - Fugitive VOC Emissions from Building Enclosures.

(A) The following exemptions apply to capture efficiency testing requirements.

(i) If a source installs a permanent total enclosure that meets the specifications of Procedure T and that directs all VOC to a control device, then the capture efficiency is assumed to be 100%, and the source is exempted from capture efficiency testing requirements. This does not exempt the source from performance of any control device efficiency testing that may be required. In addition, a source must demonstrate all criteria for a permanent total enclosure are met during testing for control efficiency.

(ii) If a source uses a vapor control system designed to collect and recover VOC (e.g., carbon adsorption system), an explicit measurement of capture efficiency is not necessary if the following conditions are met. The overall control of the system can be determined by directly comparing the input liquid VOC to the recovered liquid VOC. The general procedure for use in this situation is given in 40 CFR §60.433 (as amended through October 17, 2000 (65 FR 61761)), with the following additional restrictions.

(I) The source must be able to equate solvent usage with solvent recovery on a 24-hour (daily) basis, rather than a 30-day weighted average. This verification must be done within 72 hours following each 24-hour period of the 30-day period.

(II) The solvent recovery system (i.e., capture and control system) must be dedicated to a single process line (e.g., one process line venting to a carbon adsorber system) or if the solvent recovery system controls multiple process lines, the source must be able to demonstrate that the overall control (i.e., the total recovered solvent VOC divided by the sum of liquid VOC input to all process lines venting to the control system) meets or exceeds the most stringent standard applicable for any process line venting to the control system.

(B) The capture efficiency must be calculated using one of the following protocols referenced. Any affected source must use one of these protocols, unless a suitable alternative protocol is approved by the executive director and the United States Environmental Protection Agency (EPA).

(i) Gas/gas method using temporary total enclosure (TTE). The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.465(2)(B)(i)

(ii) Liquid/gas method using TTE. The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.465(2)(B)(ii)

(iii) Gas/gas method using the building or room enclosure (BE) in which the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from the BE are measured while operating only the affected facility. All fans and blowers in the BE must be operating as they would under normal production. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.465(2)(B)(iii)

(iv) Liquid/gas method using a BE in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from the BE are measured while operating only the affected facility. All fans and blowers in the BE must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.465(2)(B)(iv)

(C) The operating parameters selected for monitoring of the capture system for compliance with the requirements in §115.468(a) of this title (relating to Monitoring and Recordkeeping Requirements) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. The executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test.

(3) In addition to the requirements of paragraph (2) of this section, the owner or operator shall determine compliance with §115.463(2) of this title by applying the following test methods, as appropriate:

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

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

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

(D) additional performance test procedures described in 40 CFR §60.444 (as amended through October 18, 1983 (48 FR 48375)); and

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

(4) Methods other than those specified in paragraphs (1) - (3) of this section may be used if approved by the executive director and validated using Method 301 (40 CFR Part 63, Appendix A). For the purposes of this paragraph, substitute "executive director" each place that Method 301 references "administrator."

§115.468. Monitoring and Recordkeeping Requirements.

(a) Monitoring requirements. The following monitoring requirements apply to the owner or operator of a solvent cleaning operation subject to this division that uses a vapor control system in accordance with §115.463(2) of this title (relating to Control Requirements). The owner or operator shall install and maintain monitors to accurately measure and record operational parameters of all required control devices, as necessary, to ensure the proper functioning of those devices in accordance with design specifications, including:

(1) continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed;

(2) the total amount of volatile organic compounds (VOC) recovered by carbon adsorption or other solvent recovery systems during a calendar month;

(3) continuous monitoring of carbon adsorption bed exhaust; and

(4) appropriate operating parameters for vapor control systems other than those specified in paragraphs (1) - (3) of this subsection.

(b) Recordkeeping requirements. The following recordkeeping requirements apply to the owner or operator of a solvent cleaning operation subject to this division.

(1) The owner or operator shall maintain records of the testing data or the material safety data sheet, in accordance with the requirements in §115.465(1) of this title (relating to Approved Test Methods and Testing Requirements). The concentration of all VOC used to prepare the cleaning solution and, if diluted prior to use, the proportions that each of these materials is used must be recorded. Records must be sufficient to demonstrate continuous compliance with the VOC limits in §115.463(1) of this title.

(2) The owner or operator claiming an exemption in §115.461 of this title (relating to Exemptions) shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria.

(3) The owner or operator shall maintain records of any testing conducted in accordance with the provisions specified in §115.465(2) and (3) of this title.

(4) Records must be maintained a minimum of two years and be made available upon request to authorized representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution agency with jurisdiction.

§115.469. Compliance Schedules.

(a) The owner or operator of a solvent cleaning operation subject to this division shall comply with the requirements in this division no later than March 1, 2013.

(b) The owner or operator of a solvent cleaning operation that becomes subject to this division on or after March 1, 2013, shall comply with the requirements in this division no later than 60 days after becoming subject.

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

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

TRD-201102117
Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
Earliest possible date of adoption: July 24, 2011
For further information, please call: (512) 239-2548

♦ ♦ ♦

DIVISION 7. MISCELLANEOUS INDUSTRIAL ADHESIVES

30 TAC §§115.470, 115.471, 115.473 - 115.475, 115.478, 115.479

Statutory Authority

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

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

§115.470. Applicability and Definitions.

(a) Applicability. Except as specified in §115.471 of this title (relating to Exemptions), the requirements in this division apply to the owner or operator of a manufacturing or repair facility using adhesives for any of the adhesive application processes specified in §115.473 of this title (relating to Control Requirements) in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, as defined in §115.10 of this title (relating to Definitions).

(b) Definitions. Unless specifically defined in the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) or in §§3.2, 101.1, or 115.10 of this title (relating to Definitions), the terms in this division have the meanings commonly used in the field of air pollution control. In addition, the following meanings apply in this division unless the context clearly indicates otherwise.

(1) Acrylonitrile-butadiene-styrene or ABS welding--Any process to weld acrylonitrile-butadiene-styrene pipe.

(2) Adhesive--Any chemical substance applied for the purpose of bonding two surfaces together other than by mechanical means.

(3) Adhesive primer--Any product intended by the manufacturer for application to a substrate, prior to the application of an adhesive, to provide a bonding surface.

(4) Aerosol adhesive or adhesive primer--An adhesive or adhesive primer packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment.

(5) Application system--Devices or equipment designed for the purpose of applying an adhesive or adhesive primer to a surface. The devices may include, but are not be limited to, brushes, sprayers, flow coaters, dip tanks, rollers, and extrusion coaters.

(6) Ceramic tile installation adhesive--Any adhesive intended by the manufacturer for use in the installation of ceramic tiles.

(7) Chlorinated polyvinyl chloride plastic or CPVC plastic welding--A polymer of the vinyl chloride monomer that contains 67% chlorine and is normally identified with a chlorinated polyvinyl chloride marking.

(8) Chlorinated polyvinyl chloride welding or CPVC welding--An adhesive labeled for welding of chlorinated polyvinyl chloride.

(9) Contact adhesive--An adhesive:

(A) designed for application to both surfaces to be bonded together;

(B) allowed to dry before the two surfaces are placed in contact with each other;

(C) forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other;

(D) does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces; and

(E) does not include rubber cements that are primarily intended for use on paper substrates or vulcanizing fluids that are designed and labeled for tire repair only.

(10) Cove base--A flooring trim unit, generally made of vinyl or rubber, having a concave radius on one edge and a convex radius on the opposite edge that is used in forming a junction between the bottom wall course and the floor or to form an inside corner.

(11) Cove base installation adhesive--Any adhesive intended by the manufacturer to be used for the installation of cove base or wall base on a wall or vertical surface at floor level.

(12) Cyanoacrylate adhesive--Any adhesive with a cyanoacrylate content of at least 95% by weight.

(13) Daily weighted average--The total weight of volatile organic compounds (VOC) emissions from all adhesives and adhesive primers subject to the same VOC content limit in §115.473(a) of this title (relating to Control Requirements), divided by the total volume of those adhesives or adhesive primers (minus water and exempt solvent) delivered to the application system each day. Coatings subject to different emission standards in §115.473(a) of this title must not be combined for purposes of calculating the daily weighted average. In addition, determination of compliance is based on each adhesive application process.

(14) Ethylene propylenediene monomer (EPDM) roof membrane--A prefabricated single sheet of elastomeric material composed of ethylene propylenediene monomer and that is field-applied to a building roof using one layer or membrane material.

(15) Flexible vinyl--Non-rigid polyvinyl chloride plastic with a 5.0% by weight plasticizer content.

(16) Indoor floor covering installation adhesive--Any adhesive intended by the manufacturer for use in the installation of wood flooring, carpet, resilient tile, vinyl tile, vinyl-backed carpet, resilient sheet and roll, or artificial grass. Adhesives used to install ceramic tile and perimeter-bonded sheet flooring with vinyl backing onto a non-porous substrate, such as flexible vinyl, are excluded from this definition.

(17) Laminate--A product made by bonding together two or more layers of material.

(18) Metal to urethane/rubber molding or casting adhesive--Any adhesive intended by the manufacturer to bond metal to high density or elastomeric urethane or molded rubber materials, in heater molding or casting processes, to fabricate products such as rollers for computer printers or other paper handling equipment.

(19) Motor vehicle adhesive--An adhesive, including glass-bonding adhesive, used in a process that is not an automobile or light-duty truck assembly coating process, applied for the purpose of bonding two vehicle surfaces together without regard to the substrates involved.

(20) Motor vehicle glass-bonding primer--A primer, used in a process that is not an automobile or light-duty truck assembly coating process, applied to windshield or other glass, or to body openings, to prepare the glass or body opening for the application of glass-bonding adhesives or the installation of adhesive-bonded glass. Motor vehicle glass-bonding primer includes glass-bonding/cleaning primers that perform both functions (cleaning and priming of the windshield or other glass, or body openings) prior to the application of adhesive or the installation of adhesive-bonded glass.

(21) Motor vehicle weatherstrip adhesive--An adhesive, used in a process that is not an automobile or light-duty truck assembly coating process, applied to weatherstripping materials for the purpose of bonding the weatherstrip material to the surface of the vehicle.

(22) Multipurpose construction adhesive--Any adhesive intended by the manufacturer for use in the installation or repair of various construction materials, including but not limited to drywall, subfloor, panel, fiberglass reinforced plastic (FRP), ceiling tile, and acoustical tile.

(23) Outdoor floor covering installation adhesive--Any adhesive intended by the manufacturer for use in the installation of floor covering that is not in an enclosure and that is exposed to ambient weather conditions during normal use.

(24) Panel installation--The installation of plywood, pre-decorated hardboard or tileboard, fiberglass reinforced plastic, and similar pre-decorated or non-decorated panels to studs or solid surfaces using an adhesive formulated for that purpose.

(25) Perimeter bonded sheet flooring installation--The installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four inches wide around the perimeter of the sheet flooring.

(26) Plastic solvent welding adhesive--Any adhesive intended by the manufacturer for use to dissolve the surface of plastic to form a bond between mating surfaces.

(27) Plastic solvent welding adhesive primer--Any primer intended by the manufacturer for use to prepare plastic substrates prior to bonding or welding.

(28) Plastic foam--Foam constructed of plastics.

(29) Plastics--Synthetic materials chemically formed by the polymerization of organic (carbon-based) substances. Plastics are usually compounded with modifiers, extenders, or reinforcers and are capable of being molded, extruded, cast into various shapes and films, or drawn into filaments.

(30) Polyvinyl chloride plastic or PVC plastic--A polymer of the chlorinated vinyl monomer that contains 57% chlorine.

(31) Polyvinyl chloride welding adhesive or PVC welding adhesive--Any adhesive intended by the manufacturer for use in the welding of polyvinyl chloride plastic pipe.

(32) Porous material--A substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged, including, but not limited to, paper and corrugated paperboard. For the purposes of this definition, porous material does not include wood.

(33) Reinforced plastic composite--A composite material consisting of plastic reinforced with fibers.

(34) Rubber--Any natural or manmade rubber substrate, including, but not limited to, styrene-butadiene rubber, polychloroprene (neoprene), butyl rubber, nitrile rubber, chlorosulfonated polyethylene, and ethylene propylene diene terpolymer.

(35) Sheet rubber lining installation--The process of applying sheet rubber liners by hand to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.

(36) Single-ply roof membrane--A prefabricated single sheet of rubber, normally ethylene propylenediene terpolymer, that is field-applied to a building roof using one layer of membrane material. For the purposes of this definition, single-ply roof membrane does not include membranes prefabricated from ethylene propylenediene monomer.

(37) Single-ply roof membrane installation and repair adhesive--Any adhesive labeled for use in the installation or repair of single-ply roof membrane. Installation includes, as a minimum, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes, and ducts that protrude through the membrane. Repair includes gluing the edges of torn membrane together, attaching a patch over a hole, and reapplying flashings to vents, pipes, or ducts installed through the membrane.

(38) Single-ply roof membrane adhesive primer--Any primer labeled for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.

(39) Structural glazing--A process that includes the application of adhesive to bond glass, ceramic, metal, stone, or composite panels to exterior building frames.

(40) Subfloor installation--The installation of subflooring material over floor joists, including the construction of any load-bearing joists. Subflooring is covered by a finish surface material.

(41) Thin metal laminating adhesive--Any adhesive intended by the manufacturer for use in bonding multiple layers of metal to metal or metal to plastic in the production of electronic or magnetic components in which the thickness of the bond line(s) is less than 0.25 mil.

(42) Tire repair--A process that includes expanding a hole, tear, fissure, or blemish in a tire casing by grinding or gouging, applying adhesive, and filling the hole or crevice with rubber.

(43) Waterproof resorcinol glue--A two-part resorcinol-resin-based adhesive designed for applications where the bond

line must be resistant to conditions of continuous immersion in fresh or salt water.

§115.471. Exemptions.

(a) The owner or operator of adhesive application processes located on a property with actual combined emissions of volatile organic compounds (VOC) less than 3.0 tons per calendar year, when uncontrolled, from all adhesives, adhesive primers, and solvents used during related cleaning operations, is exempt from the requirements of this division, except as specified in §115.478(b)(2) of this title (relating to Monitoring and Recordkeeping Requirements).

(b) The following adhesive and adhesive primer application processes are exempt from the VOC limits in §115.473(a)(1) of this title (relating to Control Requirements):

(1) adhesives or adhesive primers being tested or evaluated in any research and development, quality assurance, or analytical laboratory;

(2) adhesives or adhesive primers used in the assembly, repair, or manufacture of aerospace or undersea-based weapons systems;

(3) adhesives or adhesive primers used in medical equipment manufacturing operations;

(4) cyanoacrylate adhesive application processes;

(5) aerosol adhesive and aerosol adhesive primer application processes;

(6) polyester-bonding putties used to assemble fiberglass parts at fiberglass boat manufacturing properties and at other reinforced plastic composite manufacturing properties; and

(7) processes using adhesives and adhesive primers that are supplied to the manufacturer in containers with a net volume of 16 ounces or less or a net weight of 1.0 pound or less.

(c) The owner or operator of any process or operation subject to another division of this chapter that specifies VOC content limits for adhesives or adhesive primers used during any of the adhesive application processes listed in §115.473(a) of this title, is exempt from the requirements in this division.

§115.473. Control Requirements.

(a) The owner or operator shall limit volatile organic compounds (VOC) emissions from all adhesives and adhesive primers used during the specified adhesive application processes to the following VOC content limits in pounds of VOC per gallon of adhesive (lb VOC/gal adhesive) (minus water and exempt compounds), as delivered to the application system. These limits are based on the daily weighted average of all adhesives delivered to the adhesive primer or adhesive application system each day. If an adhesive is used to bond dissimilar substrates together, then the applicable substrate category with the least stringent VOC content limit applies.
Figure: 30 TAC §115.473(a)

(1) The owner or operator shall meet the VOC content limits in this subsection by using one of the following options.

(A) The owner or operator shall apply low-VOC adhesives.

(B) The owner or operator shall apply low-VOC adhesives in combination with a vapor control system.

(2) As an alternative to paragraph (1) of this subsection, the owner or operator may operate a vapor control system capable of achieving an overall control efficiency of 85% of the VOC emissions from adhesives and adhesive primers. Control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.475(3) and (4) of this title (relating to Approved Test Methods and Testing Requirements). If the owner or operator complies with the overall control efficiency option under this paragraph, then the owner or operator is exempt from the application system requirements of subsection (b) of this section.

(3) An owner or operator applying low-VOC coatings in combination with a vapor control system to meet the VOC content limits in paragraph (1) of this subsection shall use the following equation to determine the minimum overall control efficiency necessary to demonstrate equivalency. Control device and capture efficiency testing must be performed in accordance with the testing requirements in §115.475(3) and (4) of this title.
Figure: 30 TAC §115.473(a)(3)

(b) The owner or operator of any adhesive application process subject to this division shall not apply adhesives unless one of the following application systems is used:

(1) electrostatic spray;

(2) high-volume, low-pressure spray (HVLP);

(3) flow coat;

(4) roll coat or hand application, including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application;

(5) dip coat;

(6) airless spray;

(7) air-assisted airless spray; or

(8) other adhesive application system capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spray. For the purpose of this requirement, the transfer efficiency of HVLP spray is assumed to be 65%.

(c) The following work practices apply to the owner or operator of each adhesive or adhesive primer application process subject to this division.

(1) For the storage, mixing, and handling of all adhesives, thinners, and adhesive-related waste materials, the owner or operator shall:

(A) store all VOC-containing adhesives, adhesive primers, and process-related waste materials in closed containers;

(B) ensure that mixing and storage containers used for VOC-containing adhesives, adhesive primers, and process-related waste materials are kept closed at all times;

(C) minimize spills of VOC-containing adhesives, adhesive primers, and process-related waste materials; and

(D) convey VOC-containing adhesives, adhesive primers, and process-related waste materials from one location to another in closed containers or pipes.

(2) For the storage, mixing, and handling of all surface preparation materials and cleaning materials, the owner or operator shall:

(A) store all VOC-containing cleaning materials and used shop towels in closed containers;

(B) ensure that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials;

(C) minimize spills of VOC-containing cleaning materials;

(D) convey VOC-containing cleaning materials from one location to another in closed containers or pipes; and

(E) minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is capture in closed containers.

(d) An adhesive application process that becomes subject to subsection (a) of this section by exceeding the exemption limits in §115.471(a) of this title (relating to Exemptions) is subject to the provisions in subsection (a) of this section even if throughput or emissions later fall below exemption limits unless emissions are maintained at or below the controlled emissions level achieved while complying with subsection (a) of this section and one of the following conditions is met.

(1) The project that caused a throughput or emission rate to fall below the exemption limits in §115.471(a) of this title must be authorized by a permit, permit amendment, standard permit, or permit by rule required by Chapters 106 or 116 of this title (relating to Permits by Rule; and Control of Air Pollution by Permits for New Construction or Modification, respectively). If a permit by rule is available for the project, the owner or operator shall continue to comply with subsection (a) of this section for 30 days after the filing of documentation of compliance with that permit by rule.

(2) If authorization by permit, permit amendment, standard permit, or permit by rule is not required for the project, the owner or operator shall provide the executive director 30 days notice of the project in writing.

§115.474. Alternate Control Requirements.

For the owner or operator of an adhesive application process subject to this division, 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.

§115.475. Approved Test Methods and Testing Requirements.

The owner or operator shall demonstrate compliance with the volatile organic compounds (VOC) content limits in §115.473(a) of this title (relating to Control Requirements) by applying the following test methods, as appropriate. Where a test method also inadvertently measures compounds that are exempt solvents, an owner or operator may exclude these exempt solvents when determining compliance with a VOC content limit. As an alternative to the test methods in this section, the VOC content of an adhesive may be determined by using analytical data from the material safety data sheet.

(1) Except for reactive adhesives, compliance with the VOC content limits in §115.473(a) of this title must be determined using Method 24 (40 Code of Federal Regulations (CFR) Part 60, Appendix A).

(2) Compliance with the VOC content limits for reactive adhesives in §115.473(a) of this title must be determined using 40 CFR Part 63, Subpart PPPP, Appendix A, (as amended through April 24, 2007 (72 FR 20237)).

(3) The owner or operator of an adhesive application process subject to §115.473 of this title shall measure the capture efficiency using the applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B (as amended through October 21, 1996 (61 FR 54559)). These procedures are: Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure; Procedure L - VOC Input; Procedure G.2 - Captured VOC Emissions (Dilution Technique); Procedure F.1 - Fugitive VOC Emissions from Temporary Enclosures; and Procedure F.2 - Fugitive VOC Emissions from Building Enclosures.

(A) The following exemptions apply to capture efficiency testing requirements.

(i) If a source installs a permanent total enclosure that meets the specifications of Procedure T and that directs all VOC to a control device, then the capture efficiency is assumed to be 100%, and the source is exempted from capture efficiency testing requirements. This does not exempt the source from performance of any control device efficiency testing that may be required. In addition, a source must demonstrate all criteria for a permanent total enclosure are met during testing for control efficiency.

(ii) If a source uses a vapor control system designed to collect and recover VOC (e.g., carbon adsorption system), an explicit measurement of capture efficiency is not necessary if the following conditions are met. The overall control efficiency of the system can be determined by directly comparing the input liquid VOC to the recovered liquid VOC. The general procedure for use in this situation is given in 40 CFR §60.433 (as amended through October 17, 2000 (65 FR 61761)), with the following additional restrictions.

(I) The source must be able to equate solvent usage with solvent recovery on a 24-hour (daily) basis, rather than a 30-day weighted average. This verification must be done within 72 hours following each 24-hour period of the 30-day period.

(II) The solvent recovery system (i.e., capture and control system) must be dedicated to a single process line (e.g., one process line venting to a carbon adsorber system) or if the solvent recovery system controls multiple process lines, the source must be able to demonstrate that the overall control efficiency (i.e., the total recovered solvent VOC divided by the sum of liquid VOC input to all process lines venting to the control system) meets or exceeds the most stringent standard applicable for any process line venting to the control system.

(B) The capture efficiency must be calculated using one of the following protocols referenced unless a suitable alternative protocol is approved by the executive director and the United States Environmental Protection Agency (EPA).

(i) Gas/gas method using temporary total enclosure (TTE). The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.475(3)(B)(i)

(ii) Liquid/gas method using TTE. The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Procedure T. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.475(3)(B)(ii)

(iii) Gas/gas method using the building or room enclosure (BE) in which the affected source is located and in which the mass of VOC captured and delivered to a control device and the mass of fugitive VOC that escapes from BE are measured while operating only the affected facility. All fans and blowers in the BE must be op-

erating as they would under normal production. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.475(3)(B)(iii)

(iv) Liquid/gas method using a BE in which the mass of liquid VOC input to process and the mass of fugitive VOC that escapes from BE are measured while operating only the affected facility. All fans and blowers in the BE must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:
Figure: 30 TAC §115.475(3)(B)(iv)

(C) The operating parameters selected for monitoring the capture system for compliance with the requirements in §115.478(a) of this title (relating to Monitoring and Recordkeeping requirements) must be monitored and recorded during the initial capture efficiency testing and thereafter during facility operation. The executive director may require a new capture efficiency test if the operating parameter values change significantly from those recorded during the initial capture efficiency test.

(4) In addition to the requirements of paragraph (3) of this section, the owner or operator shall determine compliance with §115.473(a)(2) of this title by applying the following test methods, as appropriate:

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

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

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

(D) additional performance test procedures described in 40 CFR §60.444 (as amended through October 18, 1983 (48 FR 48375)); and

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

(5) Methods other than those specified in paragraphs (1) - (4) of this section may be used if approved by the executive director and validated using Method 301 (40 CFR Part 63, Appendix A). For the purposes of this paragraph, substitute "executive director" each place that Method 301 references "administrator."

§115.478. Monitoring and Recordkeeping Requirements.

(a) Monitoring requirements. The following monitoring requirements apply to the owner or operator of an adhesive application process subject to this division that uses a vapor control system in accordance with §115.473(a)(2) of this title (relating to Control Requirements). The owner or operator shall install and maintain monitors to accurately measure and record operational parameters of all required control devices, as necessary, to ensure the proper functioning of those devices in accordance with design specifications, including:

(1) continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators or the gas temperature immediately upstream and downstream of any catalyst bed;

(2) the total amount of volatile organic compounds (VOC) recovered by carbon adsorption or other solvent recovery systems during a calendar month;

(3) continuous monitoring of carbon adsorption bed exhaust; and

(4) appropriate operating parameters for vapor control systems other than those specified in paragraphs (1) - (3) of this subsection.

(b) Recordkeeping requirements. The following recordkeeping requirements apply to the owner or operator of an adhesive application process subject to this division.

(1) The owner or operator shall maintain records of the testing data or the material safety data sheet, in accordance with the requirements in §115.475(1) of this title (relating to Approved Test Methods and Testing Requirements). Records must be sufficient to demonstrate continuous compliance with the VOC limits in §115.473(a) of this title.

(2) The owner or operator of an adhesive or adhesive primer application process claiming an exemption in §115.471 of this title (relating to Exemptions) shall maintain records sufficient to demonstrate continuous compliance with the applicable exemption criteria.

(3) The owner or operator shall maintain records of any testing conducted at an affected facility in accordance with the provisions specified in §115.475(3) and (4) of this title.

(4) Records must be maintained a minimum of two years and made available upon request to authorized representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution agency with jurisdiction.

§115.479. Compliance Schedules.

(a) The owner or operator of an adhesive application process subject to this division shall comply with the requirements in this division no later than March 1, 2013.

(b) The owner or operator of an adhesive application process that becomes subject to this division on or after March 1, 2013, shall comply with the requirements in this division no later than 60 days after becoming subject.

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

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

TRD-201102118
Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
Earliest possible date of adoption: July 24, 2011
For further information, please call: (512) 239-2548

♦ ♦ ♦

TITLE 34. PUBLIC FINANCE

PART 10. TEXAS PUBLIC FINANCE AUTHORITY

CHAPTER 227. ADMINISTRATION

34 TAC §§227.1, 227.3, 227.5

The Texas Public Finance Authority (Authority) proposes new 34 TAC Chapter 227, concerning administration, including new §§227.1, 227.3, and 227.5, regarding the Authority's policy on the use of Alternative Dispute Resolution (ADR) measures, Negotiated Rulemaking, and Alternative Dispute Resolution Procedures for Contract Claims.

Figure: 30 TAC §115.432(c)(3)

$$E = \frac{(VOC - S)}{VOC}$$

Where:

E = The required overall control efficiency.

VOC = The volatile organic compounds (VOC) content of the coatings used on the printing line on a pounds of VOC per gallon of solids basis.

S = The applicable VOC emission limit on a pounds of VOC per gallon of solids basis calculated using Equation 1 in Figure: 30 TAC §115.473(a)(3).

Figure: 30 TAC §115.435(a)(8)(B)(i)

$$CE = \frac{G_W}{(G_W + F_W)}$$

Where:

CE = The capture efficiency, decimal fraction.

G_W = The mass of volatile organic compounds (VOC) captured and delivered to control device using a temporary total enclosure (TTE) (use Procedure G.2).

F_W = The mass of fugitive VOC that escapes from a TTE (use Procedure F.1).

Figure: 30 TAC §115.435(a)(8)(B)(ii)

$$CE = \frac{(L - F)}{L}$$

Where:

CE = The capture efficiency, decimal fraction.

L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).

F = The mass of fugitive VOC that escapes from a temporary total enclosure (TTE) (use Procedure F.1).

Figure: 30 TAC §115.435(a)(8)(B)(iii)

$$CE = \frac{G}{(G + F_B)}$$

Where:

CE = The capture efficiency, decimal fraction.

G = The mass of volatile organic compounds (VOC) captured and delivered to a control device (use Procedure G.2).

F_B = The mass of fugitive VOC that escapes from building enclosure (use Procedure F.2).

Figure: 30 TAC §115.435(a)(8)(B)(iv)

$$CE = \frac{L}{F_B - L}$$

Where:

CE = The capture efficiency, decimal fraction.

L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).

F_B = The mass of fugitive VOC that escapes from a building or room enclosure (use Procedure F.2).

Figure: 30 TAC §115.450(b)(11)

Pounds of volatile organic compounds (VOC) per gallon of coating (minus water and exempt compounds)

$$= \frac{W_V}{(V_M - V_W - V_{ES})}$$

Where:

W_V = The weight of VOC contained in V_M gallons of coating measured in pounds.

V_M = The volume of coating, generally assumed to be one gallon.

V_W = The volume of water contained in V_M gallons of coating measured in gallons.

V_{ES} = The volume of exempt solvents contained in V_M gallons of coating measured in gallons.

Figure: 30 TAC §115.450(b)(12)

Pounds of volatile organic compounds (VOC) per gallon of solids $= \frac{W_V}{V_M - V_V - V_W - V_{ES}}$

Where:

W_V = The weight of VOC contained in V_M gallons of coating measured in pounds.

V_M = The volume of coating, generally assumed to be one gallon.

V_V = The volume of VOC contained in V_M gallons of coating measured in gallons.

V_W = The volume of water contained in V_M gallons of coating measured in gallons.

V_{ES} = The volume of exempt solvents contained in V_M gallons of coating measured in gallons.

Figure: 30 TAC §115.453(a)(1)(A)

Table 1.

Coating Type	Baked pounds of volatile organic compounds per gallon coating	Air-Dried pounds of volatile organic compounds per gallon coating
General Coating, One-Component	2.3	2.3
General Coating, Multi-Component	2.3	2.8
Extreme High-Gloss Coating	3.0	2.8
Extreme Performance Coating	3.0	3.5
Heat-Resistant Coating	3.0	3.5
Metallic Coating	3.5	3.5
Pretreatment Coating	3.5	3.5
Solar-Absorbent Coating	3.0	3.5

Table 2.

Coating Type	Baked pounds of volatile organic compounds per gallon solids	Air-Dried pounds of volatile organic compounds per gallon solids
General Coating, One-Component	3.3	3.3
General Coating, Multi-Component	3.3	4.5
Extreme High-Gloss Coating	5.1	4.5
Extreme Performance Coating	5.1	6.7
Heat-Resistant Coating	5.1	6.7
Metallic Coating	6.7	6.7
Pretreatment Coating	6.7	6.7
Solar-Absorbent Coating	5.1	6.7

Figure: 30 TAC §115.453(a)(1)(B)

Table 1.

Coating Type	Baked pounds of volatile organic compounds per gallon coating	Air-Dried pounds of volatile organic compounds per gallon coating
General Coating, One-Component	2.3	2.3
General Coating, Multi-Component	2.3	2.8
Extreme High-Gloss Coating	3.0	2.8
Extreme Performance Coating	3.0	3.5
Heat-Resistant Coating	3.0	3.5
Metallic Coating	3.5	3.5
Pretreatment Coating	3.5	3.5
Solar-Absorbent Coating	3.0	3.5

Table 2.

Coating Type	Baked pounds of volatile organic compounds per gallon solids	Air-Dried pounds of volatile organic compounds per gallon solids
General Coating, One-Component	3.3	3.3
General Coating, Multi-Component	3.3	4.5
Extreme High-Gloss Coating	5.1	4.5
Extreme Performance Coating	5.1	6.7
Heat-Resistant Coating	5.1	6.7
Metallic Coating	6.7	6.7
Pretreatment Coating	6.7	6.7
Solar-Absorbent Coating	5.1	6.7

Figure: 30 TAC §115.453(a)(1)(C)

Table 1.

Coating Category	Air-Dried pounds of volatile organic compounds per gallon coating	Baked pounds of volatile organic compounds per gallon coating
General Coating, One-Component	2.8	2.3
General Coating, Multi-Component	2.8	2.3
Camouflage Coating	3.5	3.5
Electric-Insulating Varnish Coating	3.5	3.5
Etching Filler Coating	3.5	3.5
Extreme High-Gloss Coating	3.5	3.0
Extreme Performance Coating	3.5	3.0
Heat-Resistant Coating	3.5	3.0
High Performance Architectural Coating	6.2	6.2
High Temperature Coating	3.5	3.5
Metallic Coating	3.5	3.5
Military Specification Coating	2.8	2.3
Mold-Seal Coating	3.5	3.5
Pan-Backing Coating	3.5	3.5
Prefabricated Architectural Coating, Multi-Component	3.5	2.3
Prefabricated Architectural Coating, One-Component	3.5	2.3
Pretreatment Coating	3.5	3.5
Repair and Touch-Up Coating	3.5	3.0
Silicone Release Coating	3.5	3.5
Solar-Absorbent Coating	3.5	3.0
Vacuum-Metalizing Coating	3.5	3.5
Drum Coating, New, Exterior	2.8	2.8
Drum Coating, New, Interior	3.5	3.5
Drum Coating, Reconditioned, Exterior	3.5	3.5
Drum Coating, Reconditioned, Interior	4.2	4.2

Table 2.

Coating Category	Air-Dried pounds of volatile organic compounds per gallon solids	Baked pounds of volatile organic compounds per gallon solids
General Coating, One-Component	4.52	3.35
General Coating, Multi-Component	4.52	3.35
Camouflage Coating	6.67	6.67
Electric-Insulating Varnish Coating	6.67	6.67
Etching Filler Coating	6.67	6.67
Extreme High-Gloss Coating	6.67	5.06
Extreme Performance Coating	6.67	5.06
Heat-Resistant Coating	6.67	5.06
High Performance Architectural Coating	38.0	38.0
High Temperature Coating	6.67	6.67
Metallic Coating	6.67	6.67
Military Specification Coating	4.52	3.35
Mold-Seal Coating	6.67	6.67
Pan-Backing Coating	6.67	6.67
Prefabricated Architectural Coating, Multi-Component	6.67	3.35
Prefabricated Architectural Coating, One-Component	6.67	3.35
Pretreatment Coating	6.67	6.67
Silicone Release Coating	6.67	6.67
Solar-Absorbent Coating	6.67	5.06
Vacuum-Metalizing Coating	6.67	6.67
Drum Coating, New, Exterior	4.52	4.52
Drum Coating, New, Interior	6.67	6.67
Drum Coating, Reconditioned, Exterior	6.67	6.67
Drum Coating, Reconditioned, Interior	9.78	9.78

Figure: 30 TAC §115.453(a)(1)(D)

Table 1.

Coating Category	pounds of volatile organic compounds per gallon coating
General Coating, One-Component	2.3
General Coating, Multi-Component	3.5
Electric-Dissipating and Shock-Free Coating	6.7
Extreme Performance Coating, Multi-Component	3.5
Metallic Coating	3.5
Military Specification Coating, One-Component	2.8
Military Specification Coating, Multi-Component	3.5
Mold-Seal Coating	6.3
Multi-Colored Coating	5.7
Optical Coating	6.7
Vacuum-Metalizing Coating	6.7

Table 2.

Coating Category	pounds of volatile organic compounds per gallon solids
General One-Component	3.35
General Multi-Component	6.67
Electric-Dissipating and Shock-Free	74.7
Extreme Performance Multi-Component	6.67
Metallic	6.67
Military Specification One-Component	4.52
Military Specification Multi-Component	6.67
Mold-Seal	43.7
Multi-Colored	25.3
Optical	74.7
Vacuum-Metalizing	74.7

Figure: 30 TAC §115.453(a)(1)(E)

Table 1.

Automotive/Transportation Coating Category	pounds of volatile organic compounds per gallon coating	pounds of volatile organic compounds per gallon solids
Flexible Primer, Baked, Interior and Exterior Parts	4.5	11.58
Non-flexible Primer, Baked, Interior and Exterior Parts	3.5	6.67
Base Coats, Baked, Interior and Exterior Parts	4.3	10.34
Clear Coat, Baked, Interior and Exterior Parts	4.0	8.76
Non-basecoat/clear coat, Baked, Interior and Exterior Parts	4.3	10.34
Primers, Air-Dried, Exterior Parts	4.8	13.80
Basecoat, Air-Dried, Exterior Parts	5.0	15.59
Clear coats, Air-Dried, Exterior Parts	4.5	11.58
Non-basecoat/clear coat, Air-Dried, Exterior Parts	5.0	15.59
Air-Dried Coatings, Interior Parts	5.0	15.59
Touch-up and Repair Coatings	5.2	17.72

Table 2.

Business Machine Coating Category	pounds of volatile organic compounds per gallon coating	pounds of volatile organic compounds per gallon solids
Primers	2.9	4.80
Topcoat	2.9	4.80
Texture Coat	2.9	4.80
Fog Coat	2.2	3.14
Touch-up and repair	2.9	4.80

Figure: 30 TAC §115.453(a)(1)(F)

Table 1.

Coating Category	pounds of volatile organic compounds per gallon coating
Extreme High-Gloss Topcoat	4.1
High-Gloss Topcoat	3.5
Pretreatment Wash Primers	6.5
Finish Primer-Surfacer	3.5
High Build Primer-Surfacer	2.8
Aluminum Substrate Antifoulant	4.7
Other Substrate Antifoulant	2.8
All other pleasure craft surface coatings for metal or plastic	3.5

Table 2.

Coating Category	pounds of volatile organic compounds per gallon solids
Extreme High-Gloss Topcoat	9.2
High-Gloss Topcoat	6.7
Pretreatment Wash Primers	55.6
Finish Primer-Surfacer	6.7
High Build Primer-Surfacer	4.6
Aluminum Substrate Antifoulant	12.8
Other Substrate Antifoulant	4.4
All other pleasure craft surface coatings for metal or plastic	6.7

Figure: 30 TAC §115.453(a)(2)

Coating Category	pounds of volatile organic compounds per gallon coating
Motor vehicle cavity wax	5.4
Motor vehicle sealer	5.4
Motor vehicle deadener	5.4
Motor vehicle gasket/gasket sealing material	1.7
Motor vehicle underbody	5.4
Motor vehicle trunk interior	5.4
Motor vehicle bedliner	1.7
Motor vehicle lubricating wax/compound	5.8

Figure: 30 TAC §115.453(a)(3)

Table 1.

Assembly Coating Process	volatile organic compounds (VOC) Limit
Electrodeposition primer (EDP) operations (including application area, spray/rinse stations, and curing oven) When solids turnover ratio (R_T) $\geq$ 0.16	0.7 pound per gallon (lb/gal) coating solids applied
EDP operations (including application area, spray/rinse stations, and curing oven) When $0.040 \leq R_T < 0.16$	$0.7 \times 350^{0.160-R_T}$ lb/gal coating solids applied
EDP operations (including application area, spray/rinse stations, and curing oven) When $R_T < 0.0400$	No VOC emission limit
Primer-surfacer operations (including application area, flash-off area, and oven)	12.0 lbs VOC/gal of solids deposited
Topcoat operations (including application area, flash-off area, and oven)	12.0 lbs VOC/gal of solids deposited
Combined primer-surfacer and topcoat operations	12.0 lbs VOC/gal of solids deposited
Final repair operations	4.8 lb VOC/gal of coating (minus water and exempt solvents)

Table 2.

Material	volatile organic compounds (VOC) Limit (excluding water and exempt compounds, as applied)
Automobile and light-duty truck glass-bonding primer	7.51 pounds volatile organic compounds per gallon (lb VOC/gal)
Automobile and light-duty truck adhesive	2.09 lb VOC/gal
Automobile and light-duty truck cavity wax	5.42 lb VOC/gal
Automobile and light-duty truck sealer	5.42 lb VOC/gal
Automobile and light-duty truck deadener	5.42 lb VOC/gal
Automobile and light-duty truck gasket/gasket sealing material	1.67 lb VOC/gal
Automobile and light-duty truck underbody coating	5.42 lb VOC/gal
Automobile and light-duty truck trunk interior coating	5.42 lb VOC/gal
Automobile and light-duty truck bedliner	1.67 lb VOC/gal
Automobile and light-duty truck weatherstrip adhesive	6.26 lb VOC/gal
Automobile and light-duty truck lubricating wax/compound	5.84 lb VOC/gal

Figure: 30 TAC §115.453(a)(4)

Coating Type	Pounds of volatile organic compounds per pound solids	Pounds of volatile organic compounds per pound coating
Pressure Sensitive Tape and Label Surface Coating	0.2	0.067
Paper, Film, and Foil Surface Coating (Not including Pressure Sensitive Tape and Label)	0.4	0.08

Figure: 30 TAC §115.453(a)(5)

$$E = \frac{(VOC - S)}{VOC}$$

Where:

E = The required overall control efficiency.

VOC = The volatile organic compounds (VOC) content of the coatings used on the coating line expressed on a solids basis in units consistent with the VOC emission limits provided in paragraph (1) or (4) of this subsection.

S = The applicable VOC emission limit in paragraph (1) or (4) of this subsection expressed on a solids basis in units consistent with the units expressed in the VOC variable above.

Figure: 30 TAC §115.455(a)(2)(B)(i)

$$U_P = T_P\left(\frac{100}{S_P}\right)$$

$$U_B = T_B\left(\frac{100}{S_B}\right)$$

$$U_C = T_C\left(\frac{100}{S_C}\right)$$

Where:

U_P = The relative primer usage in gallons of primer per square inch of solids applied.

T_P = The target dry film thickness of the primer in mils (0.001 inch).

S_P = The volume percentage of solids in the primer, minus water and exempt solvents.

U_B = The relative basecoat usage in gallons of basecoat per square inch of solids applied.

T_B = The target dry film thickness of the basecoat in mils (0.001 inch).

S_B = The volume percentage of solids in the basecoat, minus water and exempt solvents.

U_C = The relative clearcoat usage in gallons of clearcoat per square inch of solids applied.

T_C = The target dry film thickness of the clearcoat in mils (0.001 inch).

S_C = The volume percentage of solids in the clearcoat, minus water and exempt solvents.

Figure: 30 TAC §115.455(a)(2)(B)(ii)

$$Q = \frac{(U_P \times V_P) + (U_B \times V_B) + (U_C \times V_C)}{(U_P) + (U_B) + (U_C)}$$

Where:

Q = The occurrence weighted average in pounds of volatile organic compounds (VOC) per gallon of coating (minus water and exempt solvents) as applied.

U_P = The relative primer usage in gallons of primer per square inch of solids applied.

V_P = The VOC content of the primer in pounds per gallon.

U_B = The relative basecoat usage in gallons of basecoat per square inch of solids applied.

V_B = The VOC content of the basecoat in pounds per gallon.

U_C = The relative clearcoat usage in gallons of clearcoat per square inch of solids applied.

V_C = The VOC content of the clearcoat in pounds per gallon.

Figure: 30 TAC §115.455(a)(4)(B)(i)

$$CE = \frac{G_W}{(G_W + F_W)}$$

Where:

CE = The capture efficiency, decimal fraction.

G_W = The mass of volatile organic compounds (VOC) captured and delivered to control device using a temporary total enclosure (TTE) (use Procedure G.2).

F_W = The mass of fugitive VOC that escapes from a TTE (use Procedure F.1).

Figure: 30 TAC §115.455(a)(4)(B)(ii)

$$CE = \frac{(L - F)}{L}$$

Where:

CE = The capture efficiency, decimal fraction.

L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).

F = The mass of fugitive VOC that escapes from a temporary total enclosure (TTE) (use Procedure F.1).

Figure: 30 TAC §115.455(a)(4)(B)(iii)

$$CE = \frac{G}{(G + F_B)}$$

Where:

CE = The capture efficiency, decimal fraction.

G = The mass of volatile organic compounds (VOC) captured and delivered to a control device (use Procedure G.2).

F_B = The mass of fugitive VOC that escapes from building enclosure (use Procedure F.2).

Figure: 30 TAC §115.455(a)(4)(B)(iv)

$$CE = \frac{L}{F_B - L}$$

Where:

CE = The capture efficiency, decimal fraction.

L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).

F_B = The mass of fugitive VOC that escapes from building or room enclosure (use Procedure F.2).

Figure: 30 TAC §115.465(2)(B)(i)

$$CE = \frac{G_W}{(G_W + F_W)}$$

Where:

CE = The capture efficiency, decimal fraction.

G_W = The mass of volatile organic compounds (VOC) captured and delivered to control device using a temporary total enclosure (TTE) (use Procedure G.2).

F_W = The mass of fugitive VOC that escapes from a TTE (use Procedure F.1).

Figure: 30 TAC §115.465(2)(B)(ii)

$$CE = \frac{(L - F)}{L}$$

Where:

CE = The capture efficiency, decimal fraction.

L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).

F = The mass of fugitive VOC that escapes from a temporary total enclosure (use Procedure F.1).

Figure: 30 TAC §115.465(2)(B)(iii)

$$CE = \frac{G}{(G + F_B)}$$

Where:

CE = The capture efficiency, decimal fraction.

G = The mass of volatile organic compounds (VOC) captured and delivered to a control device (use Procedure G.2).

F_B = The mass of fugitive VOC that escapes from building or room enclosure (use Procedure F.2).

Figure: 30 TAC §115.465(2)(B)(iv)

$$CE = \frac{L}{F_B - L}$$

Where:

CE = The capture efficiency, decimal fraction.

L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).

F_B = The mass of fugitive VOC that escapes from a building or room enclosure (use Procedure F.2).

Figure: 30 TAC §115.473(a)

Table 1.

General Adhesive Application Processes	pounds of volatile organic compounds per gallon adhesive
Reinforced Plastic Composite	1.7
Flexible vinyl	2.1
Metal	0.3
Porous Material (Except Wood)	1.0
Rubber	2.1
Wood	0.3
Other Substrates	2.1

Table 2.

Specialty Adhesive Application Processes	pounds of volatile organic compounds per gallon adhesive
Ceramic Tile Installation	1.1
Contact Adhesive	2.1
Cove Base Installation	1.3
Floor Covering Installation (Indoor)	1.3
Floor Covering Installation (Outdoor)	2.1
Floor Covering Installation (Perimeter Bonded Sheet Vinyl)	5.5
Metal to Urethane/Rubber Molding or Casting	7.1
Motor Vehicle Adhesive	2.1
Motor Vehicle Weatherstrip Adhesive	6.3
Multipurpose Construction	1.7
Plastic Solvent Welding acrylonitrile butadiene styrene (ABS)	3.3
Plastic Solvent Welding (Except ABS)	4.2
Sheet Rubber Lining Installation	7.1
Single-Ply Roof Membrane Installation/Repair (Except Ethylene Propylene Diene Monomer)	2.1
Structural Glazing	0.8
Thin Metal Laminating	6.5
Tire Repair	0.8
Waterproof Resorcinol Glue	1.4

Table 3.

Adhesive Primer Application Processes	Pounds of volatile organic compounds per gallon adhesive
Motor Vehicle Glass-Bonding Primer	7.5
Plastic Solvent Welding Adhesive Primer	5.4
Single-Ply Roof Membrane Adhesive Primer	2.1
Other Adhesive Primer	2.1

Figure: 30 TAC §115.473(a)(3)

Equation 1.

$$S = \frac{C}{\left(1 - \left(\frac{C}{D}\right)\right)}$$

Where:

S = The applicable volatile organic compounds (VOC) emission limit expressed on a pounds of VOC per gallon of solids basis.

C = The applicable VOC content limit from §115.471 of this title (relating to Exemptions) expressed on a pounds of VOC per gallon of coating basis.

D = An assumed density of 7.36 pounds of VOC per gallon of VOC.

Equation 2.

$$E = \frac{(VOC - S)}{VOC}$$

Where:

E = The required overall control efficiency.

VOC = The volatile organic compounds (VOC) content of the coatings used on the coating line expressed on a solids basis in pounds of VOC per gallon of solids.

S = The applicable VOC emission limit expressed on a pounds of VOC per gallon of solids basis calculated using Equation 1.

Figure: 30 TAC §115.475(3)(B)(i)

$$CE = \frac{G_W}{(G_W + F_W)}$$

Where:

CE = The capture efficiency, decimal fraction.

G_W = The mass of volatile organic compounds (VOC) captured and delivered to control device using a temporary total enclosure (TTE) (use Procedure G.2).

F_W = The mass of fugitive VOC that escapes from a TTE (use Procedure F.1).

Figure: 30 TAC §115.475(3)(B)(ii)

$$CE = \frac{(L - F)}{L}$$

Where:

CE = Capture efficiency, decimal fraction.

L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).

F = The mass of fugitive VOC that escapes from a temporary total enclosure (use Procedure F.1).

Figure: 30 TAC §115.475(3)(B)(iii)

$$CE = \frac{G}{(G + F_B)}$$

Where:

CE = Capture efficiency, decimal fraction.

G = The mass of volatile organic compounds (VOC) captured and delivered to a control device (use Procedure G.2).

F_B = The mass of fugitive VOC that escapes from the building or room enclosure (use Procedure F.2).

Figure: 30 TAC §115.475(3)(B)(iv)

$$CE = \frac{L}{F_B - L}$$

Where:

CE = The capture efficiency, decimal fraction.

L = The mass of liquid volatile organic compounds (VOC) input to process (use Procedure L).

F_B = The mass of fugitive VOC that escapes from building or room enclosure (use Procedure F.2).