Texas Commission on Environmental Quality

5 Chapter 115 – Control of Air Pollution from Volatile Organic Compounds

5E Subchapter E : Solvent-Using Processes

5E2 DIVISION 2 : SURPACE COATING PROCESSES
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***************************end outline tx5E2d204***************y5s******

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SUBCHAPTER E: SOLVENT-USING PROCESSES
DIVISION 2: SURFACE COATING PROCESSES
§§115.420 - 115.427, 115.429
Effective June 25, 2015

§115.420. Applicability and Definitions.

(a) The owner or operator of a surface coating process in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas and in Gregg, Nueces, and Victoria Counties, as specified in each paragraph below, is subject to this division. All owners and operators shall be in compliance with this division in accordance with the compliance schedules listed in §115.429 of this title (relating to Counties and Compliance Schedules).

(1) Large appliance coating. The requirements in this division apply in the Beaumont-Port Arthur and El Paso areas and in Gregg, Nueces, and Victoria Counties.

(2) Metal furniture coating. The requirements in this division apply in the Beaumont-Port Arthur and El Paso areas and in Gregg, Nueces, and Victoria Counties.

(3) Coil coating. The requirements in this division apply in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas and in Gregg, Nueces, and Victoria Counties.

(4) Paper coating. The requirements in this division apply in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas and in Gregg, Nueces, and Victoria Counties. In the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, applicability is determined by the volatile organic compound (VOC) emissions from each individual paper coating line.

(A) Each paper coating line in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas that has the potential to emit less than 25 tons per year (tpy) of VOC is subject to this division.

(B) Each paper coating line in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas that has the potential to emit equal to or greater than 25 tpy of VOC is subject to the requirements in Division 5 of this Subchapter (relating to Control Requirements for Surface Coating Processes).

(5) Fabric coating. The requirements in this division apply in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas and in Gregg, Nueces, and Victoria Counties.

(6) Vinyl coating. The requirements in this division apply in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas and in Gregg, Nueces, and Victoria Counties.

(7) Can coating. The requirements in this division apply in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas and in Gregg, Nueces, and Victoria Counties.

(8) Automobile and light-duty truck coating. The requirements in this division apply in the Beaumont-Port Arthur, El Paso, and Houston-Galveston-Brazoria areas.

(9) Vehicle refinishing coating (body shops). The requirements in this division apply in the Dallas-Fort Worth area, except in Wise County, and in the El Paso and Houston-Galveston-Brazoria areas.

(10) Miscellaneous metal parts and products coating. The requirements in this division apply in the Beaumont-Port Arthur and El Paso areas and in Gregg, Nueces, and Victoria Counties. In the Dallas-Fort Worth area, except in Wise County, and the Houston-Galveston-Brazoria area, the requirements in this division apply only to designated on-site maintenance shops as specified in §115.427(8) of this title (relating to Exemptions).

(11) Factory surface coating of flat wood paneling. The requirements in this division apply in the Beaumont-Port Arthur area, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas and in Gregg, Nueces, and Victoria Counties.

(12) Aerospace coating. The requirements in this division apply in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas and in Gregg, Nueces, and Victoria Counties.

(13) Mirror backing coating. The requirements in this division apply in the Beaumont-Port Arthur area, the Dallas-Fort Worth area, except in Wise County, the El Paso area, and the Houston-Galveston-Brazoria area.

(14) Wood parts and products coating. The requirements in this division apply in the Dallas-Fort Worth area, except in Wise County, the El Paso area, and the Houston-Galveston-Brazoria area.

(15) Wood furniture manufacturing coatings. The requirements in this division apply in the Beaumont-Port Arthur area, the Dallas-Fort Worth area, except in Wise County, the El Paso area, and the Houston-Galveston-Brazoria area.

(16) Marine coatings. The requirements in this division apply in the Beaumont-Port Arthur and Houston-Galveston-Brazoria areas.

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

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

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

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

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

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

(6) Daily weighted average--The total weight of volatile organic compound (VOC) emissions from all coatings subject to the same emission standard in §115.421 of this title (relating to Emission Specifications), divided by the total volume of those coatings (minus water and exempt solvent) delivered to the application system each day. Coatings subject to different emission standards in §115.421 of this title must not be combined for purposes of calculating the daily weighted average. In addition, determination of compliance is based on each individual coating line.

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

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

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

Figure: 30 TAC §115.420(b)(9)

$$\text{Pounds of volatile organic compounds (VOC) per gallon of coating (minus water and exempt solvents)} = \frac{W_v}{(Vm - Vw - Ves)}$$

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

(10) Pounds of VOC per gallon of solids--Basis for emission limits for surface coating process. Can be calculated by the following equation:

Figure: 30 TAC §115.420(b)(10)

$$\text{Pounds of volatile organic compounds (VOC) per gallon of solids} = \frac{W_v}{(Vm - Vv - Vw - Ves)}$$

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

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

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

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

(c) Specific surface coating definitions. The following terms, when used in this division, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Aerospace coating.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(X) Confined space--A space that:

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

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

(iii) is not suitable for continuous occupancy.

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

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

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

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

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

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

(EE) Electric or radiation-effect coating--A coating or coating system engineered to interact, through absorption or reflection, with specific regions of

the electromagnetic energy spectrum, such as the ultraviolet, visible, infrared, or microwave regions. Uses include, but are not limited to, lightning strike protection, electromagnetic pulse (EMP) protection, and radar avoidance. Coatings that have been designated as "classified" by the Department of Defense are excluded.

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

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

(HH) Epoxy polyamide topcoat--A coating used where harder films are required or in some areas where engraving is accomplished in camouflage colors.

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

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

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

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

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

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

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

Figure: 30 TAC §115.420(c)(1)(OO)

$$\text{Grams of Volatile Organic Compounds per Liter of Coating} = \frac{Ws - Ww - Wes}{Vs - Vw - Ves}$$

Where:

W_s =weight of total volatiles in grams
W_w =weight of water in grams
W_{es} =weight of exempt compounds in grams
V_s =volume of coating in liters
V_w =volume of water in liters
V_{es} =volume of exempt compounds in liters

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(NNN) Sealant--A material used to prevent the intrusion of water, fuel, air, or other liquids or solids from certain areas of aerospace vehicles or

components. There are two categories of sealants: extrudable/rollable/brushable sealants and sprayable sealants.

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

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

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

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

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

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

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

(VVV) Specialized function coating--A coating that fulfills extremely specific engineering requirements that are limited in application and are characterized

by low volume usage. This category excludes coatings covered in other specialty coating categories.

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

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

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

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

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

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

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

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

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

Figure: 30 TAC §115.420(c)(1)(EEEE)

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

Where:

W_i = weight of the "i"th volatile organic compounds (VOC) compound, grams

W_w = weight of water, grams

W_e = weight of nonwater, non-VOC compound, grams

MW_i = molecular weight of the "i"th VOC compound, g/g-mole

MW_w = molecular weight of water, g/g-mole

MW_e = molecular weight of exempt compound, g/g-mole

PP_c = VOC composite partial pressure at 20 degrees Celsius, millimeters of mercury (mm Hg)

VP_i = vapor pressure of the "i"th VOC compound at 20 degrees Celsius, mm Hg

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

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

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

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

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

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

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

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

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

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

(9) Miscellaneous metal parts and products coating.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(11) Marine coatings.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(S) Nuclear specialty coating--Any protective coating used to seal porous surfaces such as steel (or concrete) that otherwise would be subject to intrusion by radioactive materials. These coatings must be resistant to long-term (service life) cumulative radiation exposure (ASTM D4082-83), relatively easy to decontaminate (ASTM D4256-83), and resistant to various chemicals to which the coatings are likely to be exposed (ASTM 3912-80). (For nuclear coatings, see the general protective requirements outlined by the U.S. Atomic Energy Commission in a report entitled "U.S. Atomic Energy Commission Regulatory Guide 1.54" dated June 1973, available through

the Government Printing Office at (202) 512-2249 as document number A74062-00001.)

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

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

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

(W) Repair and maintenance of thermoplastic coating of commercial vessels (specialty coating)--Any vinyl, chlorinated rubber, or bituminous resin coating that is applied over the same type of existing coating to perform the partial recoating of any in-use commercial vessel. (This definition does not include coal tar epoxy coatings, which are considered "general use" coatings.)

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

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

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

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

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

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

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

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

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

(12) Automobile and light-duty truck manufacturing.

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

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

(13) Vehicle refinishing (body shops).

(A) Basecoat/clearcoat system--A topcoat system composed of a pigmented basecoat portion and a transparent clearcoat portion. The VOC content of a basecoat (BCCA-AG)/clearcoat (cc) system shall be calculated according to the following formula.

Figure: 30 TAC §115.420(c)(13)(A)

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

Where:
$VOC\ T_{bc/cc}$ = the volatile organic compounds (VOC) content, in pounds of VOC per gallon (less water and exempt solvent) as applied, in the basecoat/clearcoat system
VOC_{bc} = the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, of any given basecoat
VOC_{cc} is the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, of any given clearcoat

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

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

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

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

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

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

Figure: 30 TAC §115.420(c)(13)(G)

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

Where:

$\text{VOC } T_{3\text{-stage}}$ = the volatile organic compounds (VOC) content, in pounds of VOC per gallon (less water and exempt solvent) as applied, in the three-stage system
VOC_{bc} = the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, of any given basecoat
VOC_{mc} = the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, of any given midcoat
VOC_{cc} = the VOC content, in pounds of VOC per gallon (less water and exempt solvent) as applied, of any given clearcoat

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

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

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

(15) Wood parts and products. The following terms apply to wood parts and products coating facilities subject to §115.421(14) of this title.

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

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

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

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

(E) Semitransparent spray stains and toners--Colored liquids applied to wood to change or enhance the surface without concealing the surface, including but not limited to, toners and nongrain-raising stains.

(F) Semitransparent wiping and glazing stains--Colored liquids applied to wood that require multiple wiping steps to enhance the grain character and to partially fill the porous surface of the wood.

(G) Shellacs--Coatings formulated solely with the resinous secretions of the lac beetle (laccifer lacca), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.

(H) Topcoat--A coating which provides the final protective and aesthetic properties to wood finishes.

(I) Varnishes--Clear wood finishes formulated with various resins to dry by chemical reaction on exposure to air.

(J) Wash coat--A low-solids clear liquid applied over semitransparent stains and toners to protect the color coats and to set the fibers for subsequent sanding or to separate spray stains from wiping stains to enhance color depth.

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

(16) Wood furniture manufacturing facilities. The following terms apply to wood furniture manufacturing facilities subject to §115.421(15) of this title.

(A) Adhesive--Any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means. Adhesives are not considered to be coatings or finishing materials for wood furniture manufacturing facilities subject to §115.421(15) of this title.

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

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

(D) Continuous coater--A finishing system that continuously applies finishing materials onto furniture parts moving along a conveyor system. Finishing materials that are not transferred to the part are recycled to the finishing material reservoir. Several types of application methods can be used with a continuous coater, including spraying, curtain coating, roll coating, dip coating, and flow coating.

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

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

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

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

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

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

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

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

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

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

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

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

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

(R) Wood furniture component--Any part that is used in the manufacture of wood furniture. Examples include, but are not limited to, drawer sides, cabinet doors, seat cushions, and laminated tops. However, foam seat cushions manufactured and fabricated at a facility that does not engage in any other wood furniture or wood furniture component manufacturing operation are excluded from this definition.

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

Adopted June 3, 2015 Effective June 25, 2015

§115.421. Emission Specifications.

The owner or operator of the surface coating processes specified in §115.420(a) of this title (relating to Applicability and Definitions) shall not cause, suffer, allow, or permit volatile organic compound (VOC) emissions to exceed the specified emission limits in paragraphs (1) - (16) of this subsection. These limitations are based on the daily weighted average of all coatings delivered to each coating line, except for those in paragraph (9) of this subsection which are based on paneling surface area, and those in paragraph (15) of this subsection which, if using an averaging approach, must use one of the daily averaging equations within that paragraph. The owner or operator of a surface coating operation subject to paragraph (10) of the subsection may choose to comply by using the monthly weighted average option as defined in §115.420(c)(1)(YY) of this title.

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

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

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

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

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

(6) Vinyl coating. VOC emissions from the coating of vinyl fabrics or sheets must not exceed 3.8 pounds per gallon of coating (minus water and exempt solvent)

delivered to the application system (0.45 kg/liter). Plastisol coatings should not be included in calculations.

(7) Can coating. The following VOC emission limits must be achieved, on the basis of VOC solvent content per unit of volume of coating (minus water and exempt solvent) delivered to the application system:

Figure: 30 TAC §115.421(7)

Affected Operation	Pounds of Volatile Organic Compounds (VOC) per Gallon of Coating	Kilogram of VOC per Liter of Coating
Sheet Basecoat (Exterior and Interior) and Over-Varnish	2.8	0.34
Two-Piece Can Exterior (Base-Coat and Over-Varnish)	2.8	0.34
Two- and Three-Piece Can Interior Body Spray, Two-Piece Can Exterior End (Spray or Roll Coat)	4.2	0.51
Three-Piece Can Side-Seam Spray	5.5	0.66
End Sealing Compound	3.7	0.44

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

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

Figure: 30 TAC §115.421(8)(A)

Coating Type	Pounds of Volatile Organic Compounds (VOC) per Gallon of Coating	Kilogram of VOC per Gallon of Coating
Clear Coat or an Interior Protective Coating for Pails and Drums	4.3	0.52
Low-Bake Coating or Coating Using Air or Forced Air Driers	3.5	0.42
Extreme Performance	3.5	0.42

Coating, Including Milling Maskants		
All Other Coating Applications that Pertain to MMPP, Including High-Bake Coatings	3.0	0.36

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

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

(9) Factory surface coating of flat wood paneling. The following emission limits apply to each product category of factory-finished paneling (regardless of the number of coats applied):

Figure: 30 TAC §115.421(9)

Product Category	Pounds of volatile organic compounds (VOC) per 1,000 Square Feet of Coated Surface	Kilograms of VOC per 100 Meters Squared of Coated Surface
Printed Interior Wall Panels Made of Hardwood Plywood and Thin Particle Board (Less Than 1/4 Inch) in Thickness	6.0	2.9
Natural Finish Hardwood Plywood Panels	12.0	5.8
Hardwood Paneling with Class II Finish (American National Standard Institute Standard PS-59-73)	10.0	4.8

(10) Aerospace coatings. The VOC content of coatings, including any VOC-containing materials added to the original coating supplied by the manufacturer, that are applied to aerospace vehicles or components must not exceed the following limits (in grams of VOC per liter of coating, less water and exempt solvent). The following applications are exempt from the VOC content limits of this paragraph: manufacturing

or re-work of space vehicles or antique aerospace vehicles or components of each; touchup; United States Department of Defense classified coatings; and separate coating formulations in volumes less than 50 gallons per year to a maximum of 200 gallons per year for all such formulations at an account.

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

(i) primer, 350;

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

(iii) chemical milling maskants:

(I) Type I, 622; and

(II) Type II, 160.

(B) For specialty coatings:

Figure: 30 TAC §115.421(10)(B)

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

Coating type Limit Coating type Limit
Ablative Coating 600
Adhesion Promoter 890
Adhesive Bonding Primers:
Cured at 250°F or below 850
Cured above 250°F 1030
Adhesives:
Commercial Interior Adhesive 760
Cyanoacrylate Adhesive 1,020
Fuel Tank Adhesive 620
Nonstructural Adhesive 360
Rocket Motor Bonding Adhesive 890
Rubber-based Adhesive 850
Structural Autoclavable Adhesive 60
Structural Nonautoclavable Adhesive . . 850
Antichafe Coating 660

Bearing Coating 620
Caulking and Smoothing Compounds 850
Chemical Agent-Resistant Coating 550
Clear Coating 720
Commercial Exterior Aerodynamic
Structure Primer 650
Compatible Substrate Primer 780
Corrosion Prevention Compound 710
Cryogenic Flexible Primer 645
Dry Lubricative Material 880
Cryoprotective Coating 600
Electric or Radiation-Effect Coating 800
Electrostatic Discharge and Electromagnetic
Interference (EMI) Coating 800
Elevated-Temperature Skydrol-Resistant
Commercial Primer 740
Epoxy Polyamide Topcoat 660
Fire-Resistant (interior) Coating 800
Flexible Primer 640
Flight-Test Coatings:
Missile or Single Use Aircraft 420
All Other 840
Fuel-Tank Coating 720
High-Temperature Coating 850
Insulation Covering 740
Intermediate Release Coating 750
Lacquer 830
Maskants:
Bonding Maskant 1,230
Critical Use and Line Sealer Maskant . 1,020
Seal Coat Maskant 1,230
Metallized Epoxy Coating 740
Mold Release 780
Optical Anti-Reflective Coating 750
Part Marking Coating 850
Pretreatment Coating 780
Rain Erosion-Resistant Coating 850
Rocket Motor Nozzle Coating 660
Scale Inhibitor 880
Screen Print Ink 840
Sealants:
Extrudable/Rollable/Brushable Sealant . 280
Sprayable Sealant 600

Silicone Insulation Material 850
Solid Film Lubricant 880
Specialized Function Coating 890
Temporary Protective Coating 320
Thermal Control Coating 800
Wet Fastener Installation Coating 675
Wing Coating 850

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

Figure: 30 TAC §115.421(11)

Operation (Including Application, Flashoff, and Oven Areas)	Coating Delivered (Minus Water and Exempt Solvent) Pounds of Volatile Organic Compounds (VOC) per Gallon of Coating	Coating Delivered (Minus Water and Exempt Solvent) Kilogram of VOC per Liter of Coating	Solids Deposited Pounds of VOC per Gallon of Solids	Solids Deposited Kilograms per Liter of Solids
Prime Application (Body and Front-End Sheet Metal)	1.2	0.15	Not Applicable	Not Applicable
Primer Surfacer Application	2.8	0.34	15.1	1.81
Topcoat Application	2.8	0.34	15.1	1.81
Final Repair Application End Sealing Compound	4.8	0.58	*	*

* As an alternative to the emission limitation of 4.8 pounds of VOC per gallon of coating applied for final repair, if a source owner does not compile records sufficient to enable determination of a daily weighted average VOC content, compliance with the final repair emission limitation may be demonstrated each day by meeting a standard of 4.8 pounds

of VOC per gallon of coating (minus water and exempt solvents) on an occurrence weighted average basis. Compliance with such alternative emission limitation shall be determined in accordance with the procedure specified in §115.425(3) of this title.

(12) Vehicle refinishing coating (body shops). VOC emissions from coatings or solvents must not exceed the following limits, as delivered to the application system. Additional control requirements for vehicle refinishing (body shops) are referenced in §115.422 of this title (relating to Control Requirements).

Figure: 30 TAC §115.421(12)

Coating Type (Minus Water and Exempt Solvent)	Pounds of Volatile Organic Compounds (VOC) per Gallon of Coating	Kilograms of VOC per Liter of Coating
Primer or Primer Surfacers	5.0	0.60
Precoat	5.5	0.66
Pretreatment	6.5	0.78
Single-Stage Topcoats	5.0	0.60
Basecoat or Clearcoat Systems	5.0	0.60
Three-Stage Systems	5.2	0.62
Specialty Coatings	7.0	0.84
Sealers	6.0	0.72
Wipe-Down Solutions	1.4	0.17

(13) Surface coating of mirror backing.

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

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

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

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

(14) Surface coating of wood parts and products. VOC emissions from the coating of wood parts and products must not exceed the following limits, as delivered to the application system, for each surface coating type. All VOC emissions from solvent washings must be included in determination of compliance with the emission limitations in this paragraph, unless the solvent is directed into containers that prevent evaporation into the atmosphere.

Figure: 30 TAC §115.421(14)

Coating Type (Minus Water and Exempt Solvent)	Pounds of Volatile Organic Compounds (VOC) per Gallon of Coating	Kilograms of VOC per Liter of Coating
Clear Topcoat	5.9	0.71
Wash Coat	6.5	0.78
Final Repair Coat	6.0	0.72
Semitransparent Wiping and Glazing Stain	6.6	0.79
Semitransparent Spray Stains and Toners	6.9	0.83
Opaque Ground Coats and Enamels	5.5	0.66
Clear Sealers	6.2	0.74
Clear Shellac	5.4	0.65
Opaque Shellac	5.0	0.60
Varnish	5.0	0.60
All Other Coatings	7.0	0.84

(15) Surface coating at wood furniture manufacturing facilities. For facilities which are subject to this paragraph, adhesives are not considered to be coatings or finishing materials.

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

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

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

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

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

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

(III) if the wood furniture manufacturing facility uses an acid-cured alkyd amino vinyl sealer and a topcoat other than an acid-cured alkyd amino conversion varnish topcoat, the sealer must contain no more than 2.3 kilograms of VOC per kilogram of solids (2.3 pounds of VOC per pound of solids), as applied, and the topcoat must contain no more than 1.8 kilograms of VOC per kilogram of solids (1.8 pounds of VOC per pound of solids), as delivered to the application system; or

(iv) using an averaging approach and demonstrating that actual daily emissions from the wood furniture manufacturing facility are less than or equal to the lower of the actual versus allowable emissions using one of the following inequalities:

Figure: 30 TAC §115.421(15)(A)(iv)

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

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

Where:

TC_i = kilograms of solids of topcoat "i" used;

SE_i = kilograms of solids of sealer "i" used;

WC_i = kilograms of solids of washcoat "i" used;

BC_i = kilograms of solids of basecoat "i" used;

ST_i = liters of stain "i" used;

ER_{TCi} = volatile organic compounds (VOC) content of topcoat "i" in kilograms of VOC per kilogram of solids, as delivered to the application system;

ER_{SEi} = VOC content of sealer "i" in kilograms of VOC per kilogram of solids, as delivered to the application system;

ER_{WCi} = VOC content of washcoat "i" in kilograms of VOC per kilogram of solids, as delivered to the application system;

ER_{BCi} = VOC content of basecoat "i" in kilograms of VOC per kilogram of solids, as delivered to the application system; and

ER_{STi} = VOC content of stain "i" in kilograms of VOC per kilogram of solids, as delivered to the application system.

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

(v) using a vapor control system that will achieve an equivalent reduction in emissions as the requirements of clauses (i) or (ii) of this subparagraph. If this option is used, the requirements of §115.423(3) of this title do not apply; or

(vi) using a combination of the methods presented in clauses (i) - (v) of this subparagraph.

(B) Strippable booth coatings used in cleaning operations must not contain more than 0.8 kilogram of VOC per kilogram of solids (0.8 pound of VOC per pound of solids), as delivered to the application system.

(16) Marine coatings.

(A) The following VOC emission limits apply to the surface coating of ships and offshore oil or gas drilling platforms at shipbuilding and ship repair operations, and are based upon the VOC content of the coatings as delivered to the application system.

Figure: 30 TAC §115.421(16)(A)

Coating Category	Grams of volatile organic compounds (VOC) per liter coating (minus water and exempt solvent)[a, b]	Pounds of VOC per gallon coating (minus water and exempt solvent)[a, b]	Grams of VOC per liter solids[c] when t≥4.5°C (40°F)	Grams of VOC per liter of solids[c] when t<4.5°C (40°F)[d]
General use	340	2.83	571	728
Specialty:				
Air flask	340	2.83	571	728
Antenna	530	4.42	1,439	-----
Antifoulant	400	3.33	765	971
Heat resistant	420	3.5	841	1,069
High-gloss	420	3.5	841	1,069
High-temperature	500	4.17	1,237	1,597
Inorganic zing high-build	340	2.83	571	728
Military exterior	340	2.83	571	728
Mist	610	2.08	2,235	-----
Navigational aids	550	4.58	1,597	-----
Nonskid	340	2.83	571	728
Nuclear	420	3.50	841	1,069

Organic zinc	360	3.00	630	802
Pretreatment wash primer	780	6.50	11,095	-----
Repair and maintenance of thermoplastics	550	4.58	1,597	-----
Rubber camouflage	340	2.83	571	728
Sealant for thermal spray aluminum	610	5.08	2,235	-----
Special marking	490	4.08	1,178	-----
Specialty interior	340	2.83	571	728
Tack coat	610	5.08	2,235	-----
Undersea weapons systems	340	2.83	571	728
Weld-through preconstruction primer	650	5.42	2,885	-----

[a]The limits are expressed in two sets of equivalent units: grams per liter of coating (minus water and exempt solvent); and grams per liter of solids. Either set of limits may be used to demonstrate compliance.
[b] To convert from grams/liter to pounds/gallon, multiply by (3.785 liters/gallon)(pound/453.6 grams) or 1/120. For compliance purposes, metric units define the standards.
[c] VOC limits expressed in units of mass of VOC per volume of solids were derived from the VOC limits expressed in units of mass of VOC per volume of coating assuming the coatings contain no water or exempt compounds and that the volumes of all components within a coating are additive.
[d] These limits apply during cold-weather time periods (i.e., temperatures below 4.5 degrees Celsius (40 degrees Fahrenheit)). Cold-weather allowances are not given to coatings in categories that permit less than 40% solids nonvolatiles) content by volume. Such coatings are subject to the same limits regardless of weather conditions.

(B) For a coating to which thinning solvent is routinely or sometimes added, the owner or operator shall determine the VOC content as follows.

(i) Prior to the first application of each batch, designate a single thinner for the coating and calculate the maximum allowable thinning ratio (or ratios, if the shipbuilding and ship repair operation complies with the cold-weather limits in addition to the other limits specified in subparagraph (A) of this paragraph) for each batch as follows.

Figure: 30 TAC §115.421(16)(B)(i)

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

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

(ii) If the volume fraction of solids in the batch as supplied V_s is not supplied directly by the coating manufacturer, the owner or operator shall determine V_s as follows.

Figure: 30 TAC §115.421(16)(B)(ii)

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

Where:
V_s = Volume fraction of solids in the batch (liter of solids per liter of coating);
$m_{volatiles}$ = Total volatiles in the batch, including volatile organic compounds (VOC), water, and exempt compounds (grams per liter of coating); and
D_{avg} = Average density of volatiles in the batch (grams per liter).

Adopted June 3, 2015 Effective June 25, 2015

§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 Applicability and Definitions), the following control requirements apply. In Gregg, Nueces, and Victoria Counties, the control requirements in paragraph (5) of this section apply.

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

(A) install and operate a system that 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) 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 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(15) of this title (relating to Emission Specifications).

(A) No compounds containing more than 8.0% by weight of VOC may 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 be used to prepare the booth prior to applying the booth coating.

(B) Normally closed containers must be used for storage of finishing, cleaning, and washoff materials.

(C) Conventional air spray guns may 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 of VOC per kilogram of solids (1.0 pound 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 that:

(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 be pumped or drained into a normally closed container.

(E) Emissions from washoff operations must 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(16) of this title.

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

(B) All containers, tanks, vats, drums, and piping systems must 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 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(10) of this title.

(A) One or more of the following application techniques must 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 meet the definition of aqueous cleaning solvent in §115.420(c)(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 feet of energized electrical systems. Energized electrical systems means any alternating current or direct current 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) 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 be removed and the enclosed cleaner must 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 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 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 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(c)(1) of this title, are exempt from this subparagraph.

(6) Any surface coating operation in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas that becomes subject to §115.421 of this title by exceeding the exemption limits in §115.427 of this title (relating to Exemptions) is subject to the provisions in §115.421 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 of this title 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 §115.427 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 §115.421 of this title 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.

(7) 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.

Adopted June 3, 2015 Effective June 25, 2015

§115.423. Alternate Control Requirements.

The alternate control requirements for surface coating processes in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas and in Gregg, Nueces, and Victoria Counties are as follows.

(1) Emission calculations for surface coating operations performed to satisfy the conditions of §101.23 of this title (relating to Alternate Emission Reduction ("Bubble") Policy), §115.910 of this title (relating to Availability of Alternate Means of Control), or other demonstrations of equivalency with the specified emission limits in this division must be based on the pounds of volatile organic compounds (VOC) per gallon of solids for all affected coatings. The owner or operator shall use the following equation to convert emission limits from pounds of VOC per gallon of coating to pounds of VOC per gallon of solids:

Figure: 30 TAC §115.423(1)

$$S = C / (1 - C / D))$$

where:

S = the applicable emission limit from §115.421 expressed on a pounds of VOC per gallon of solids basis
C = the applicable emission limit from §115.421 expressed on a pounds of VOC per gallon of coating basis
D = an assumed solvent density of 7.36 pounds of VOC per gallon

(2) Any alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division, such as use of improved transfer efficiency, may be approved by the executive director in accordance with §115.910 of this title if emission reductions are demonstrated to be substantially equivalent.

(3) If a vapor control system is used to control emissions from coating operations:

(A) the capture and abatement system must be capable of achieving and maintaining emission reductions equivalent to the emission limitations of §115.421 of this title (relating to Emission Specifications) and an overall control efficiency of at least 80% of the VOC emissions from those coatings. The owner or operator shall use the following equation to determine the minimum overall control efficiency necessary to demonstrate equivalency with the emission limitations of §115.421 of this title:

Figure: 30 TAC §115.423(3)(A)

$$E = (VOC_a - S) / VOC_a$$

Where:

E = the required overall control efficiency

VOC_a = the volatile organic compounds (VOC) content of the coatings used on the coating line expressed on a pounds of VOC per 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 emission limit from §115.421 of this title expressed on a pounds of VOC per gallon of solids basis (as calculated in paragraph (1) of this section)

(B) the owner or operator shall submit design data for each capture system and emission control device that is proposed for use to the executive director for approval. In the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, capture efficiency testing must be performed in accordance with §115.425(4) of this title (relating to Testing Requirements).

(4) For any surface coating process or processes at a specific property, the executive director may approve requirements different from those in §115.421(8) of this title based upon his determination that such requirements will result in the lowest emission rate that is technologically and economically reasonable. When such a determination is made, 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.

Adopted June 3, 2015 Effective June 25, 2015

§115.424. Inspection Requirements.

(a) The owner or operator of each surface coating process subject to §115.421 of this title (relating to Emissions Specifications) must provide samples, without charge, upon request by representatives of the executive director, EPA, or local air pollution control agency.

(b) The representative or inspector requesting the sample will determine the amount of coating needed to test the sample to determine compliance.

Adopted June 29, 2000 Effective July 20, 2000

§115.425. Testing Requirements.

The testing requirements for surface coating processes in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas and in Gregg, Nueces, and Victoria Counties are as follows.

(1) The owner or operator shall determine compliance with §115.421 of this title (relating to Emission Specifications) by applying the following test methods, as appropriate, except as specified in paragraph (5) of this section. Where a test method also inadvertently measures compounds that are exempt solvent, an owner or operator may exclude these exempt solvents when determining compliance with an emission standard:

(A) Test Method 24 (40 Code of Federal Regulations (CFR) Part 60, Appendix A) with a one-hour bake;

(B) ASTM International 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 (VOC) Emitted by Paint, Ink, and Other Coatings (EPA-450/3-84-019)," as in effect December, 1984;

(D) additional test procedures described in 40 Code of Federal Regulations (CFR) §60.446; or

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

(2) Compliance with §115.423(3) of this title (relating to Alternate Control Requirements) must be determined by applying the following test methods, as appropriate:

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

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

(C) Test 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 §60.044; or

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

(3) Compliance with the alternative emission limits in §115.421(11) of this title must be determined by applying the following test methods, as appropriate:

(A) Protocol for Determining the Daily VOC Emission Rate of Automobile and Light-Duty Truck Topcoat Operations (EPA 450/3-88-018); or

(B) The procedure contained in this paragraph for determining daily compliance with the alternative emission limitation in §115.421(11) 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 characteristics identified below, which are represented in the following equations by the variables shown, are established for each repair material as sprayed:

Figure: 30 TAC §115.425(3)(B)(i)

	Primer	Basecoat	Clearcoat
Volatile Organic Compounds (VOC) (pounds per gallon)	Vp	Vb	Vc
Volume solids of coating (minus water and exempt solvents) (%)	Sp	Sb	Sc
Target dry film build (mils)	Tp	Tb	Tc

(ii) The relative occurrence weighted usage is calculated as follows:

Figure: 30 TAC §115.425(3)(B)(ii)

Relative Primer Usage (Up)

$$Up = Tp \times (100 / Sp)$$

Relative Basecoat Usage (Ub)

$$Ub = Tb \times (100 / Sb)$$

Relative Clearcoat Usage (Uc)

$$Uc = Tc \times (100 / Sc)$$

(iii) The occurrence weighted average (Q) in pounds of VOC per gallon of coating (minus water and exempt solvents) as applied for each potential combination of repair coatings is calculated according to paragraph (4) of this section.

Figure: 30 TAC §115.425(3)(B)(iii)

$$Q = \frac{(Up \times Vp) + (Ub \times Vb) + (Uc \times Vc)}{(Up) + (Ub) + (Uc)}$$

(4) In the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, the owner or operator of surface coating processes subject to §115.423(3) of this title shall measure the capture efficiency using applicable procedures outlined in 40 CFR §52.741, Subpart O, Appendix B. 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) Exemptions to capture efficiency testing requirements:

(i) If a source installs a permanent total enclosure (PTE) that meets the specifications of Procedure T and 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 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, 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 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 four 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 §115.425(4)(B)(i)

$$CE = Gw / (Gw + Fw)$$

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)

(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 §115.425(4)(B)(ii)

$$CE = (L - F) / L$$

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)

(iii) Gas/gas method using the building or room in which the affected source is located as the enclosure (BE) and in which 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 capture efficiency equation to be used for this protocol is:

Figure: 30 TAC §115.425(4)(B)(iii)

$$CE = G / (G + Fb)$$

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)

(iv) Liquid/gas method using a BE in which L and F 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 §115.425(4)(B)(iv)

$$CE = (L - Fb) / L$$

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)

(C) 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 must 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, except that all mirror backing coating facilities must accomplish the initial capture efficiency testing by July 31, 1994.

(iii) During an initial pretest meeting, the executive director and the source owner or operator shall identify those operating parameters that must be monitored to ensure that capture efficiency does not change significantly over time. These parameters must 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.

(5) The following additional testing requirements apply to each aerospace vehicle or component coating facility subject to §115.421(10) of this title.

(A) For coatings which are not waterborne (water-reducible), determine the VOC content of each formulation (less water and less exempt solvents) as applied using manufacturer's supplied data or Method 24 of 40 CFR Part 60, Appendix A. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance must be based on the results from the Method 24 analysis. For water-borne (water-reducible) coatings, manufacturer's supplied data alone can be used to determine the VOC content of each formulation.

(B) For aqueous and semiaqueous cleaning solvents, manufacturers' supplied data must be used to determine the water content.

(C) For hand-wipe cleaning solvents, manufacturers' supplied data or standard engineering reference texts or other equivalent methods shall be used to determine the vapor pressure or VOC composite vapor pressure for blended cleaning solvents.

(D) Except for specialty coatings, compliance with the test method requirements of 40 CFR §63.750, (National Emission Standards for Aerospace Manufacturing and Rework Facilities), is considered to represent compliance with the requirements of this section.

(6) Test methods other than those specified in paragraphs (1) - (5) of this section may be used if validated by 40 CFR Part 63, Appendix A, Test Method 301. For

the purposes of this paragraph, substitute "executive director" each place that Test Method 301 references "administrator."

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§115.426. Monitoring and Recordkeeping Requirements.

The following recordkeeping requirements apply to the owner or operator of each surface coating process in the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas and in Gregg, Nueces, and Victoria Counties. Records of non-exempt solvent washings are not required to be kept if the non-exempt solvent is directed into containers that prevent evaporation into the atmosphere.

(1) The owner or operator shall satisfy the following recordkeeping requirements.

(A) A material data sheet must be maintained that documents the volatile organic compound (VOC) content, composition, solids content, solvent density, and other relevant information regarding each coating and solvent available for use in the affected surface coating processes sufficient to determine continuous compliance with applicable control limits.

(B) 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 control limits. Such records must be sufficient to calculate the applicable weighted average of VOC for all coatings.

(i) As an alternative to the recordkeeping requirements of this subparagraph, the owner or operator of any vehicle refinishing (body shop) operation subject to §115.421(11) of this title may substitute the recordkeeping requirements specified in §106.436 of this title (relating to Auto Body Refinishing Facility (Previously Standard Exemption 124)) provided that all coatings and solvents meet the emission limits of §115.421(11) of this title. If the owner or operator of a vehicle refinishing (body shop) operation that uses any coating or solvent which exceeds the limits of §115.421(11) of this title, then the owner or operator shall maintain daily records of the quantity and type of each coating and solvent consumed in sufficient detail to calculate the daily weighted average of VOC for all coatings and solvents.

(ii) As an alternative to the recordkeeping requirements of this subparagraph, the owner or operator of any wood parts and products coating operation subject to §115.421(14) of this title may substitute the recordkeeping requirements specified in §106.231 of this title (relating to Manufacturing, Refinishing,

and Restoring Wood Products) provided that all coatings and solvents meet the emission limits of §115.421(14) of this title. If the owner or operator of a wood parts and products coating operation uses any coating or solvent which exceeds the limits of §115.421(14) of this title, then the owner or operator shall maintain daily records of the quantity and type of each coating and solvent consumed in sufficient detail to calculate the daily weighted average of VOC for all coatings and solvents.

(iii) As an alternative to the recordkeeping requirements of this subparagraph, the owner or operator of any surface coating operation that qualifies for exemption under §115.427(3)(C) of this title (relating to Exemptions) shall maintain records of total gallons of coating and solvent used in each month, and total gallons of coating and solvent used in the previous 12 months.

(C) Records shall be maintained of any testing conducted at an affected facility in accordance with the provisions specified in §115.425 of this title (relating to Testing Requirements).

(D) Records required by subparagraphs (A) - (C) of this paragraph must be maintained for at least two years and must be made available upon request by representatives of the executive director, the United States Environmental Protection Agency (EPA), or any local air pollution control agency with jurisdiction.

(2) The owner or operator of any surface coating facility that utilizes a vapor control system approved by the executive director in accordance with §115.423(3) of this title (relating to Alternate Control Requirements) shall:

(A) 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:

(i) continuous monitoring of the exhaust gas temperature immediately downstream of direct-flame incinerators and/or the gas temperature immediately upstream and downstream of any catalyst bed;

(ii) the total amount of VOC recovered by carbon adsorption or other solvent recovery systems during a calendar month;

(iii) continuous monitoring of carbon adsorption bed exhaust; and

(iv) appropriate operating parameters for vapor control systems other than those specified in clauses (i) - (iii) of this subparagraph;

(B) maintain records of any testing conducted in accordance with the provisions specified in §115.425(2) of this title; and

(C) maintain all records at the affected facility for at least two years and make such records available to representatives of the executive director, EPA, or any local air pollution control agency with jurisdiction, upon request.

(3) The owner or operator shall maintain, on file, the capture efficiency protocol submitted under §115.425(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 and/or control device destruction or removal efficiency test may be required.

(4) The owner or operator shall maintain records sufficient to document the applicability of the conditions for exemptions referenced in §115.427 of this title.

(5) The following additional requirements apply to each aerospace vehicle or component coating process subject to §115.421(10) of this title. The owner or operator shall:

(A) for coatings:

(i) maintain a current list of coatings in use with category and VOC content as applied; and

(ii) record coating usage on an annual basis;

(B) for aqueous and semiaqueous hand-wipe cleaning solvents, maintain a list of materials used with corresponding water contents;

(C) for vapor pressure compliant hand-wipe cleaning solvents:

(i) maintain a current list of cleaning solvents in use with their respective vapor pressures or, for blended solvents, VOC composite vapor pressures; and

(ii) maintain a record cleaning solvent usage on an annual basis; and

(D) for cleaning solvents with a vapor pressure greater than 45 millimeters of mercury at 20 degrees Celsius used in exempt hand-wipe cleaning operations:

(i) maintain a list of exempt hand-wipe cleaning processes; and

(ii) maintain a record cleaning solvent usage on an annual basis.

(6) Except for specialty coatings, compliance with the recordkeeping requirements of 40 Code of Federal Regulations §63.752, (National Emission Standards for Aerospace Manufacturing and Rework Facilities), is considered to represent compliance with the requirements of this section.

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§115.427. Exemptions.

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 exemptions apply.

(1) The following coating operations are exempt from the miscellaneous metal parts and products surface coating emission specifications in §115.421(8) of this title (relating to Emission Specifications):

(A) aerospace vehicles and components;

(B) in the Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, vehicle refinishing (body shops); and

(C) in the Beaumont-Port Arthur and Houston-Galveston-Brazoria areas, ships and offshore oil or gas drilling platforms.

(2) The following coating operations are exempt from the factory surface coating of flat wood paneling emission specifications in §115.421(9) of this title:

(A) the manufacture of exterior siding;

(B) tile board; or

(C) particle board used as a furniture component.

(3) In the Beaumont-Port Arthur, Dallas-Fort Worth, El Paso, and Houston-Galveston-Brazoria areas, the following exemptions apply to surface coating processes, except for vehicle refinishing (body shops) controlled by §115.421(12) of this title. Excluded from the volatile organic compounds (VOC) emission calculations are coatings and solvents used in surface coating activities that are not addressed by the surface coating categories of §115.421(1) - (16) 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 pounds per hour and 15 pounds in any consecutive 24-hour period are exempt from §115.421 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 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 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 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.

(E) Wood furniture manufacturing facilities that are subject to and are complying with §115.421(15) of this title and §115.422(3) of this title (relating to Control Requirements) are exempt from §115.421(14) of this title. These wood furniture manufacturing facilities must continue to comply with §115.421(14) of this title until these facilities are in compliance with §115.421(15) 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 (tpy) are exempt from §115.421(15) and §115.422(3) of this title.

(G) In Hardin, Jefferson, and Orange Counties, wood parts and products coating facilities are exempt from §115.421(14) of this title.

(H) In Hardin, Jefferson, and Orange Counties, shipbuilding and ship repair operations that, when uncontrolled, emit a combined weight of VOC from ship and offshore oil or gas drilling platform surface coating operations less than 50 tpy are exempt from §115.421(16) and §115.422(4) of this title.

(I) In Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties, shipbuilding and ship repair operations that, when uncontrolled, emit a combined weight of VOC from ship and offshore oil or gas drilling platform surface coating operations less than 25 tpy are exempt from §115.421(16) 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(12) 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(11)(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) In Gregg, Nueces, and Victoria Counties, surface coating operations located at any property that, when uncontrolled, will emit a combined weight of VOC less than 550 pounds (249.5 kilograms) in any continuous 24-hour period are exempt from §115.421 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(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.

(8) In the Dallas-Fort Worth and Houston-Galveston-Brazoria areas, 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 tpy of VOC from all coatings applied; and

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

(9) In the Dallas-Fort Worth area, except in Wise County, and the Houston-Galveston-Brazoria area, the re-coating of used miscellaneous metal parts and products at a designated on-site maintenance shop that was exempt from §115.421(8) 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(8) 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. Miscellaneous metal parts and products coating processes in Wise County are not subject to this division.

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§115.429. Counties and Compliance Schedules.

(a) In Brazoria, Chambers, Collin, Dallas, Denton, Ellis, El Paso, Fort Bend, Galveston, Gregg, Hardin, Harris, Jefferson, Johnson, Kaufman, Liberty, Montgomery, Nueces, Orange, Parker, Rockwall, Tarrant, Victoria, and Waller Counties, the compliance date has passed and the owner or operator of a surface coating process shall continue to comply with this division.

(b) In Hardin, Jefferson, and Orange Counties the compliance date has 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.

(c) The owner or operator of a paper surface coating process located in the Dallas-Fort Worth area, except Wise County, and Houston-Galveston-Brazoria area, 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.

(d) The owner or operator of a surface coating process in Wise County shall comply with the requirements in this division as soon as practicable, but no later than January 1, 2017.

(e) The owner or operator of a surface coating process in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties that becomes subject to this division on or after the applicable compliance date in this section shall comply with the requirements in this division as soon as practicable, but no later than 60 days after becoming subject.

(f) Upon the date the commission publishes notice in the *Texas Register* that the Wise County nonattainment designation for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard is no longer legally effective, the owner or operator of each surface coating process in Wise County is not required to comply with any of the requirements in this division.

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