Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

SUBPART C. PROTECTION OF NATURAL RESOURCES

ARTICLE III. AIR RESOURCES

CHAPTER 121. GENERAL PROVISIONS

§ 121.1. Definitions.

The definitions in section 3 of the act (35 P. S. § 4003) apply to this article. In addition, the following words and terms, when used in this article, have the following meanings, unless the context clearly indicates otherwise:

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***Class II hardboard paneling finish*-A finish that meets the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.**

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***Decorative interior panel*-Interior wall paneling that is usually grooved, frequently embossed and sometimes grain printed to resemble various wood species. Interior panels are typically manufactured at the same facilities as tileboard, although in much smaller quantities. The substrate can be hardboard, plywood, medium density fiberboard (MDF) or particleboard.**

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***ENGINEERED WOOD PANEL PRODUCT*- A DERIVATIVE WOOD PRODUCT THAT IS MANUFACTURED BY BINDING TOGETHER THE STRANDS, PARTICLES, FIBERS OR VENEERS OF WOOD WITH ADHESIVES, RESINS, OTHER COATINGS OR ADDITIVES, OR A COMBINATION OF THESE, TO FORM A COMPOSITE MATERIAL. THE MANUFACTURING PROCESS MAY ALSO USE HEAT OR PRESSURE, OR BOTH, TO FORM THE PRODUCT. THE PRODUCT IS MANUFACTURED TO PRECISE DESIGN SPECIFICATIONS WHICH ARE TESTED TO MEET NATIONAL OR INTERNATIONAL STANDARDS.**

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***Exterior siding*-Siding made of solid wood, hardboard or waferboard. Siding made of solid wood or hardboard is typically primed at the manufacturing facility and finished in**

includes exterior trim.

***Exterior trim*-Material made out of siding panels and used for edges and corners around the siding. Exterior trim is typically manufactured at the same facility as exterior siding and coated with the same coatings as siding.**

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***Flat wood paneling coating*-A protective, decorative or functional material applied to a flat wood paneling product, including a decorative interior panel, exterior siding or tileboard.**

***FLAT WOOD PANELING PRODUCT*-A WOOD PANELING PRODUCT USED IN CONSTRUCTION INCLUDING DECORATIVE INTERIOR PANELS, EXTERIOR SIDING AND TILEBOARD (CLASS I HARDBOARD).**

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***Hardboard*-A panel manufactured primarily from interfelted lignocellulosic fibers that are consolidated under heat and pressure in a hot-press.**

***Hardwood plywood*-Plywood on which the surface layer is a veneer of hardwood.**

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***MDF-Medium density fiberboard*-An engineered wood panel product manufactured from individual wood fibers combined with wax and resin and consolidated under extreme heat and pressure.**

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***Natural-finish hardwood plywood panel*-A panel on which the original grain pattern is enhanced by an essentially transparent finish frequently supplemented by filler and toner.**

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***Particleboard*-A manufactured board made of individual wood particles that have been coated with a binder and formed into flat sheets by pressure.**

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***PREMIUM INTERIOR WALL PANELING PRODUCT*- A PRODUCT THAT HAS MORE STRINGENT PRODUCT PERFORMANCE REQUIREMENTS (NAMELY, ADHESION AND HARDNESS STANDARDS; AND HOUSEHOLD STAIN, SCRUB AND**

APPEARANCE) COMPARED TO STANDARD INTERIOR WALL PANELING.

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***Plywood*-A structural material made of layers of laminated plies of veneers or layers of wood glued together, usually with the grains of adjoining layers at right angles to each other.**

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***Printed interior panel*-A panel on which the grain or natural surface is obscured by filler and basecoat upon which a simulated grain or decorative pattern is printed.**

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***Thin particleboard*-Particleboard that has a thickness of ¼ inch or less.**

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***Tileboard*-A premium interior wall paneling product made of hardboard that is used in high moisture areas of the home, including kitchens and bathrooms [~~. Tileboard~~] , AND WHICH meets the specifications for Class I hardboard approved by the American National Standards Institute.**

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***Waferboard*-A structural material made from rectangular wood flakes of controlled length and thickness bonded together with waterproof phenolic resin under extreme heat and pressure. The layers of flakes are not oriented.**

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CHAPTER 129. STANDARDS FOR SOURCES

SOURCES OF VOCs

§ 129.51. General.

(a) *Equivalency*. Compliance with §§ 129.52**, 129.52a, 129.52b, 129.52c** and 129.54—129.73 may be achieved by alternative methods if the following exist:

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(3) Compliance by a method other than the use of a low VOC coating or ink which meets the applicable emission limitation in §§ 129.52, **129.52a, 129.52b, 129.52c,** 129.67 and 129.73

[(relating to surface coating processes; graphic arts systems; and aerospace manufacturing and rework)] shall be determined on the basis of equal volumes of solids.

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(6) The alternative compliance method is incorporated into a plan approval or operating permit, or both, reviewed by the EPA, including the use of an air cleaning device to comply with § 129.52, **§ 129.52a, § 129.52b, § 129.52c,** § 129.67, § 129.68(b)(2) and (c)(2) or § 129.73.

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[*Editor's note: Section 129.52c is new and printed in regular type to enhance readability.*]

§ 129.52c. Control of VOC emissions from flat wood paneling surface coating processes.

(a) *Applicability.* Except as specified below, this section applies to the owner and operator of a flat wood paneling surface coating process if the total actual VOC emissions from all flat wood paneling surface coating operations listed in Table I (relating to emission limits of VOCs for flat wood paneling surface coatings), including related cleaning activities, at the facility are equal to or greater than 15 pounds (6.8 kilograms) per day, before consideration of controls. This section does not apply to the following:

(1) A field-applied coating process. **FIELD-APPLIED COATINGS ARE REGULATED UNDER CHAPTER 130, SUBCHAPTER C (RELATING TO ARCHITECTURAL AND INDUSTRIAL MAINTENANCE COATINGS).**

(2) A coating process regulated under §§ 129.101-129.107 (relating to wood furniture manufacturing operations).

(3) A coating process regulated under §§ 129.52(f) and 129.52, Table I, Category 11 (relating to surface coating processes; and wood furniture manufacturing operations).

(b) *Existing RACT permit.* The requirements of this section supersede the requirements of a RACT permit issued to the owner or operator of a source subject to subsection (a) prior to January 1, **[~~2011~~] 2012**, under §§ 129.91 – 129.95 (relating to stationary sources of NOx and VOCs) to control, reduce or minimize VOCs from a flat wood paneling surface coating process, except to the extent the RACT permit contains more stringent requirements.

(c) *Emission limits.* Beginning January 1, **[~~2011~~] 2012**, a person subject to this section may not cause or permit the emission into the outdoor atmosphere of VOCs from a flat wood paneling coating process unless one of the following limitations is met:

(1) The VOC content of each as applied coating is equal to or less than the limit specified in Table I.

(i) The VOC content of each as applied coating, expressed in units of weight of VOC per volume of coating solids, shall be calculated as follows:

$$\mathbf{VOC = (W_o)(D_c)/V_n}$$

Where:

VOC = VOC content in lb VOC/gal of coating solids

W_o = Weight percent of VOC (W_v-W_w-W_{ex})

W_v = Weight percent of total volatiles (100%-weight percent solids)

W_w = Weight percent of water

W_{ex} = Weight percent of exempt solvent(s)

D_c = Density of coating, lb/gal, at 25°C

V_n = Volume percent of solids of the as applied coating

(ii) **THE VOC CONTENT LIMITS OF TABLE I MAY BE MET BY CALCULATING A WEIGHTED-AVERAGE OF THE VOC CONTENT OF ALL COATINGS USED ON A SINGLE FLAT WOOD PANELING SURFACE COATING PROCESS LINE EACH DAY. THE DAILY WEIGHTED AVERAGE SHALL BE CALCULATED USING THE FOLLOWING EQUATION:**

$$VOC_w = \frac{\sum_{i=1}^{n} C_i V_i}{V_T}$$

WHERE:

VOC_w=THE DAILY WEIGHTED AVERAGE VOC CONTENT, AS APPLIED, OF ALL COATINGS USED ON A SINGLE FLAT WOOD PANELING SURFACE COATING PROCESS LINE, IN LB VOC/GAL OF COATING SOLIDS

n=THE NUMBER OF DIFFERENT COATINGS USED EACH DAY ON THE SINGLE FLAT WOOD PANELING SURFACE COATING PROCESS LINE

V_i=THE VOLUME SOLIDS FOR EACH COATING, AS APPLIED, USED EACH DAY ON THE SINGLE FLAT WOOD PANELING SURFACE COATING PROCESS LINE, IN GALLONS

C_i=THE VOC CONTENT OF EACH COATING, AS APPLIED, USED EACH DAY ON THE SINGLE FLAT WOOD PANELING SURFACE COATING PROCESS LINE, IN LB VOC/GAL COATING SOLIDS

V_t=THE TOTAL VOLUME OF SOLIDS FOR ALL COATINGS COMBINED, AS APPLIED, USED EACH DAY ON THE SINGLE FLAT WOOD PANELING SURFACE COATING PROCESS LINE, IN GALLONS

(iii) Sampling and testing shall be done in accordance with the procedures and test methods specified in Chapter 139 (relating to sampling and testing).

(2) The overall weight of VOCs emitted to the atmosphere is reduced through the use of oxidation or solvent recovery or another method that is acceptable under § 129.51(a) (relating to general). The overall efficiency of a control system, as determined by the test methods and procedures specified in Chapter 139, may be no less than 90% or may be no less than the equivalent efficiency as calculated by the following equation, whichever is less stringent:

$$O = (1 – E/V) \times 100$$

Where:

V = The VOC content of the as applied coating, in lb VOC/gal of coating solids.

E = The Table I limit in lb VOC /gal of coating solids.

O = The overall required control efficiency.

(d) *Compliance monitoring procedures.* The owner or operator of a facility subject to this section shall maintain records sufficient to demonstrate compliance with this section. The owner or operator shall maintain daily records of:

(1) The following parameters for each coating, thinner, other component or cleaning solvent as supplied:

(i) Name and identification number of the coating, thinner, other component or cleaning solvent.

(ii) Volume used.

(iii) Mix ratio.

(iv) Density or specific gravity.

(v) Weight percent of total volatiles, water, solids and exempt solvents.

(vi) The volume percent of solids for each coating used in the flat wood paneling coating process.

(vii) VOC content.

(2) The VOC content of each as applied coating or cleaning solvent.

(e) *Recordkeeping and reporting requirements.* The records required under subsection (d) shall be **[~~maintained~~] :**

(1) MAINTAINED for 2 years **[~~and shall be submitted~~] , UNLESS A LONGER PERIOD IS REQUIRED BY § 127.511(b)(2) (RELATING TO MONITORING AND RELATED RECORDKEEPING AND REPORTING REQUIREMENTS).**

(2) SUBMITTED to the Department **[~~on~~] UPON RECEIPT OF A WRITTEN** request.

(f) *Coating application methods.* A person subject to this section may not cause or permit the emission into the outdoor atmosphere of VOCs from a flat wood paneling surface coating process unless the coatings are applied using one or more of the following coating application methods:

(1) Offset rotogravure coating.

(2) Curtain coating.

(3) Direct roll coating.

(4) Reverse roll coating.

(5) Hand brush or hand roller coating.

(6) High volume-low pressure (HVLP) spray coating.

(7) **AIRLESS SPRAY COATING.**

(8) AIR-ASSISTED AIRLESS SPRAY COATING.

(9) ELECTROSTATIC COATING.

(10) Other coating application method, if approved in writing by the Department prior to use.

(i) The coating application method must be capable of achieving a transfer efficiency equivalent to or better than that achieved by a method listed in paragraphs **[~~(1)-(6)~~] (1)-(9)**.

(ii) The request for approval must be submitted in writing.

(g) *Exempt coatings.* The VOC coating content standards in Table I do not apply to a coating used exclusively for determining product quality and commercial acceptance and other small quantity coatings, if the coating meets the following criteria:

(1) The quantity of coating used does not exceed 50 gallons per year for a single coating and a total of 200 gallons per year for all coatings combined for the facility.

(2) The owner or operator of the facility requests, in writing, and the Department approves, in writing, the exemption prior to use of the coating.

(h) *Work practice requirements for coating-related activities.* The owner or operator of a flat wood paneling surface coating process subject to this section shall comply with the following work practices for coating-related activities:

(1) Store all VOC-containing coatings, thinners and coating-related waste materials in closed containers.

(2) Minimize spills of VOC-containing coatings, thinners and coating-related waste materials and clean up spills immediately.

(3) Convey VOC-containing coatings, thinners and coating–related waste materials from one location to another in closed containers or pipes.

(4) Ensure that mixing and storage containers used for VOC-containing coatings, thinners and coating-related waste materials are kept closed at all times, except when depositing or removing these materials.

(i) *Work practice requirements for cleaning materials.* The owner or operator of a flat wood paneling surface coating process subject to this section shall comply with the following work practices for cleaning materials:

(1) Store all VOC-containing cleaning materials, waste cleaning materials and used shop towels in closed containers.

(2) Minimize spills of VOC-containing cleaning materials and waste cleaning materials and clean up spills immediately.

(3) Convey VOC-containing cleaning materials and waste cleaning materials from one location to another in closed containers or pipes.

(4) Ensure that mixing vessels and storage containers used for VOC-containing cleaning materials and waste cleaning materials are kept closed at all times, except when depositing or removing these materials.

(5) Minimize VOC emissions during cleaning of storage, mixing and conveying equipment.

Table I
Emission Limits of VOCs for Flat Wood Paneling Surface Coatings
Weight of VOC per Volume of Coating Solids, as Applied

Surface Coatings, Inks or Adhesives Applied to the Following Flat Wood Paneling Categories	**lbs VOC per gallon coating solids**	**grams VOC per liter coating solids**
Printed interior panels made of hardwood plywood or thin particleboard	2.9	350
Natural-finish hardwood plywood panels	2.9	350
Class II finishes on hardboard panels	2.9	350
Tileboard	2.9	350
Exterior siding	2.9	350

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§ 129.66. Compliance schedules and final compliance dates.

The owner or operator of a source newly subject to the requirements of §**§** 129.52**—129.52c**, §§ 129.59—129.61 or §§ 129.67—129.69 as a result of revised applicability requirements of this title relating to the control of VOC shall achieve compliance with the applicable emission limitations within 1 year of the date of publication of the notice of final adoption of this requirement in the *Pennsylvania Bulletin*. Newly subject sources or facilities are those which were not subject to the emission limitations because they emitted less than the cutoff levels or operated at de minimis production levels prior to the date of publication of the limitation in the *Pennsylvania Bulletin*, but are now subject to the standard because they meet or exceed the cutoff levels contained in § 129.52(a), **§ 129.52a(a), § 129.52b(a), § 129.52c(a)** or § 129.69 **[(relating to surface coating processes; and manufacture of pneumatic rubber tires)]**. The date of adoption of the applicable emission standard for these previously unregulated sources will be determined to be the date that the applicable cutoff levels contained in § 129.52**, § 129.52a, § 129.52b, § 129.52c** or § 129.69 are published in the *Pennsylvania Bulletin.*