

**Order**  
**Department of Environmental Protection**  
**Environmental Quality Board**  
**(25 Pa. Code Chapters 121 and 129)**  
**Flat Wood Paneling Surface Coating Processes**

The Environmental Quality Board (Board) amends Chapters 121 and 129 (relating to general provisions; and standards for sources) as set forth in Annex A.

The final-form rulemaking amends Chapter 129 to limit emissions of volatile organic compounds (VOCs) from the use and application of coatings and cleaning materials in flat wood paneling surface coating processes. The amendments add § 129.52c (relating to control of VOC emissions from flat wood paneling surface coating processes) and revise §§ 129.51 and 129.66 (relating to general; and compliance schedules and final compliance dates). The final-form rulemaking also amends § 121.1 (relating to definitions).

This order was adopted by the Board at its meeting on (date).

**A. Effective Date**

This final-form rulemaking will be effective upon publication in the *Pennsylvania Bulletin*.

**B. Contact Persons**

For further information contact Arleen Shulman, Chief, Division of Air Resource Management, P.O. Box 8468, Rachel Carson State Office Building, Harrisburg, PA 17105-8468, (717) 772-3436, or Kristen Furlan, Assistant Counsel, Bureau of Regulatory Counsel, P.O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. Persons with a disability may use the Pennsylvania AT&T Relay Service by calling (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This final-form rulemaking is available electronically through the Department of Environmental Protection's (Department) Web site at [www.depweb.state.pa.us](http://www.depweb.state.pa.us) (Keyword: Public Participation).

**C. Statutory Authority**

This final-form rulemaking is authorized under section 5 of the Air Pollution Control Act (APCA) (35 P. S. § 4005), which in subsection (a)(1) grants the Board the authority to adopt rules and regulations for the prevention, control, reduction and abatement of air pollution in this Commonwealth, and which in subsection (a)(8) grants the Board the authority to adopt rules and regulations designed to implement the provisions of the Clean Air Act (CAA).

**D. Background and Purpose**

The purpose of this final-form rulemaking is to reduce VOC emissions from flat wood paneling surface coating processes. VOCs are a precursor for ozone formation. Ground-level ozone is not emitted directly by surface coatings to the atmosphere, but is formed by a photochemical reaction between VOCs and nitrogen oxides (NOx) in the presence of sunlight.

The final-form rulemaking adopts the emission limits and other requirements of the U.S. Environmental Protection Agency's (EPA) 2006 Control Techniques Guidelines (CTG) for flat wood paneling coatings to meet Federal CAA requirements.

The EPA is responsible for establishing National Ambient Air Quality Standards (NAAQS) for six criteria pollutants considered harmful to public health and the environment: ozone, particulate matter, NO<sub>x</sub>, carbon monoxide, sulfur dioxide and lead. The CAA established two types of NAAQS: primary standards, limits set to protect public health; and secondary standards, limits set to protect public welfare, including protection against visibility impairment and from damage to animals, crops, vegetation and buildings. The EPA has established primary and secondary ozone NAAQS to protect public health and welfare.

When ground-level ozone is present in concentrations in excess of the Federal health-based 8-hour NAAQS for ozone, public health and welfare are adversely affected. Ozone exposure correlates to increased respiratory disease and higher mortality rates. Ozone can inflame and damage the lining of the lungs. Within a few days, the damaged cells are shed and replaced. Over a long time period, lung tissue may become permanently scarred, resulting in permanent loss of lung function and a lower quality of life. When ambient ozone levels are high, more people with asthma have attacks that require a doctor's attention or use of medication. Ozone also makes people more sensitive to allergens including pet dander, pollen and dust mites, all of which can trigger asthma attacks.

The EPA has concluded that there is an association between high levels of ambient ozone and increased hospital admissions for respiratory ailments including asthma. While children, the elderly and those with respiratory problems are most at risk, even healthy individuals may experience increased respiratory ailments and other symptoms when they are exposed to high levels of ambient ozone while engaged in activities that involve physical exertion. High levels of ozone also affect animals in ways similar to humans.

In addition to causing adverse human and animal health effects, the EPA has concluded that ozone affects vegetation and ecosystems, leading to reductions in agricultural crop and commercial forest yields by destroying chlorophyll; reduced growth and survivability of tree seedlings; and increased plant susceptibility to disease, pests, and other environmental stresses, including harsh weather. In long-lived species, these effects may become evident only after several years or even decades and have the potential for long-term adverse impacts on forest ecosystems. Ozone damage to the foliage of trees and other plants can decrease the aesthetic value of ornamental species used in residential landscaping, as well as the natural beauty of parks and recreation areas. Through deposition, ground-level ozone also contributes to pollution in the Chesapeake Bay. The economic value of some welfare losses due to ozone can be calculated, such as crop yield loss from both reduced seed production and visible injury to some leaf crops, including lettuce, spinach and tobacco, as well as visible injury to ornamental plants, including grass, flowers and shrubs. Other types of welfare loss may not be quantifiable, such as the reduced aesthetic value of trees growing in heavily visited parks.

High levels of ground-level ozone can also cause damage to buildings and synthetic fibers, including nylon, and reduced visibility on roadways and in natural areas. The implementation of additional measures to address ozone air quality nonattainment in this Commonwealth is

necessary to protect the public health and welfare, animal and plant health and welfare and the environment.

In July 1997, the EPA established primary and secondary ozone standards at a level of 0.08 parts per million (ppm) averaged over eight hours. 62 FR 38855 (July 18, 1997). In 2004, the EPA designated 37 counties in this Commonwealth as 8-hour ozone nonattainment areas for the 1997 8-hour ozone NAAQS. This Commonwealth is meeting the 1997 standard in all areas except the five-county Philadelphia area. The areas in which the 1997 standard has been attained are required to have permanent and enforceable control measures to ensure violations do not occur for the next decade.

Furthermore, in March 2008, the EPA lowered the standard to 0.075 ppm averaged over eight hours to provide even greater protection for children, other at-risk populations and the environment against the array of ozone-induced adverse health and welfare effects. See 73 FR 16436 (March 27, 2008). The EPA is reconsidering the March 2008 ozone NAAQS and proposed on January 19, 2010, to set a more protective 8-hour ozone primary standard between 0.060 and 0.070 ppm to provide increased protection for children and other at-risk groups. See 75 FR 2938. The EPA also proposed that the secondary ozone standard, which was set identically to the revised primary standard in the 2008 final rule, should instead be a new cumulative, seasonal standard. See 75 FR 2938. This seasonal standard is designed to protect plants and trees from damage occurring from repeated ozone exposure, which can reduce tree growth, damage leaves, and increase susceptibility to disease. The final revised ozone NAAQS is expected in October 2010.

There are no Federal statutory or regulatory limits for VOC emissions from flat wood paneling surface coating processes. State regulations to control VOC emissions from flat wood paneling surface coating processes are required under Federal law, however, and will be reviewed by the EPA for whether they meet the “reasonably available control technology” (RACT) requirements of the CAA and its implementing regulations. *Consumer and Commercial Products, Group II: Control Techniques Guidelines in Lieu of Regulations for Flexible Packaging Printing Materials, Lithographic Printing Materials, Letterpress Printing Materials, Industrial Cleaning Solvents, and Flat Wood Paneling Coatings*, 71 FR 58745, 58747 (October 5, 2006).

Section 172(c)(1) of the CAA provides that State Implementation Plans (SIPs) for nonattainment areas must include “reasonably available control measures,” including RACT, for sources of emissions. 42 U.S.C. § 7502(c)(1). Section 182(b)(2) of the CAA provides that for moderate ozone nonattainment areas, states must revise their SIPs to include RACT for sources of VOC emissions covered by a CTG document issued by the EPA prior to the area’s date of attainment. 42 U.S.C. § 7511a(b)(2). More importantly, § 184(b)(1)(B) of the CAA requires that states in the Ozone Transport Region (OTR), including Pennsylvania, submit a SIP revision requiring implementation of RACT for all sources of VOC emissions in the state covered by a specific CTG. 42 U.S.C. § 7511c(b)(1)(B).

Section 183(e) of the CAA directs the EPA to list for regulation those categories of products that account for at least 80% of the VOC emissions from consumer and commercial products in ozone nonattainment areas. 42 U.S.C. § 7511b(e). Section 183(e)(3)(C) of the CAA further

provides that the EPA may issue a CTG in place of a National regulation for a product category where the EPA determines that the CTG will be “substantially as effective as regulations” in reducing emissions of VOC in ozone nonattainment areas. 42 U.S.C. § 7511b(e)(3)(C).

In 1995, the EPA listed flat wood paneling coatings on its § 183(e) list and, in 2006, issued a CTG for flat wood paneling coatings. See 60 FR 15264 (March 23, 1995) and 71 FR 58745 (October 5, 2006). In the 2006 notice, the EPA determined that the CTG would be substantially as effective as a National regulation in reducing VOC emissions from these product categories in ozone nonattainment areas. See 71 FR 58745.

The CTG provides states with the EPA’s recommendation of what constitutes RACT for the covered category. States can use the recommendations provided in the CTG to inform their own determination as to what constitutes RACT for VOC emissions from the covered category. State air pollution control agencies are free to implement other technically sound approaches that are consistent with the CAA requirements and the EPA’s implementing regulations or guidelines.

The Department has reviewed the recommendations included in the 2006 CTG for flat wood paneling coatings for their applicability to the ozone reduction measures necessary for this Commonwealth. The Department has determined that the measures provided in the CTG for flat wood paneling coatings are appropriate to be implemented in this Commonwealth as RACT for this category.

This final-form rulemaking will assist in reducing VOC emissions locally as well as reducing the transport of VOC emissions and ground-level ozone to downwind states. Adoption of VOC emission requirements for flat wood paneling surface coating processes is part of the Commonwealth’s strategy, in concert with other OTR jurisdictions, to further reduce transport of VOC ozone precursors and ground-level ozone throughout the OTR to attain and maintain the 8-hour ozone NAAQS. The final-form rulemaking is required under the CAA and is reasonably necessary to attain and maintain the health-based 8-hour ozone NAAQS and to satisfy related Clean Air Act requirements in this Commonwealth. This final-form rulemaking will be submitted to the EPA as a revision to the SIP.

The final-form rulemaking was discussed with the Air Quality Technical Advisory Committee (AQTAC) on June 17, 2010. The AQTAC concurred with the Department’s recommendation to present the final-form amendments to the Board for approval for publication as a final regulation. The Department also consulted with the Citizens Advisory Council and the Small Business Compliance Advisory Committee (SBCAC) on July 28, 2010. Neither the CAC nor the SBCAC had concerns.

#### **E. Summary of Regulatory Requirements; and Changes to the Proposed Rulemaking**

The final-form rulemaking adds definitions of the following terms to § 121.1 to support the addition of § 129.52c: “Class II hardboard paneling finish,” “decorative interior panel,” “engineered wood panel product,” “exterior siding,” “exterior trim,” “flat wood paneling coating,” “flat wood paneling product,” “hardboard,” “hardwood plywood,” “MDF-medium density fiberboard,” “natural finish hardwood plywood panel,” “particleboard,” “premium

interior wall paneling product,” “plywood,” “printed interior panel,” “thin particleboard,” “tileboard” and “waferboard.”

The final-form rulemaking amends § 129.51(a) to extend its coverage to flat wood paneling surface coating processes covered by this final-form rulemaking. Section 129.51(a) provides an alternative method for owners and operators of facilities to achieve compliance with air emission limits.

The final-form rulemaking adds § 129.52c to regulate VOC emissions from flat wood paneling surface coating processes. The applicability of this new section is described in subsection (a), which establishes that emission limits and other requirements of this section apply 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. Subsection (a) specifies that § 129.52c does not apply to the following: (1) field-applied coating processes, because these are regulated under Chapter 130, Subchapter C (relating to architectural and industrial maintenance coatings); coating processes regulated under §§ 129.101-129.107 (relating to wood furniture manufacturing operations); and (3) coating processes regulated under § 129.52(f) and § 129.52 Table I, Category 11 (relating to surface coating processes; and wood furniture manufacturing operations).

Subsection (b) explains that the requirements of § 129.52c supersede the requirements of a RACT permit for VOC emissions from a flat wood paneling surface coating operation already issued to the owner or operator of a source subject to § 129.52c, except to the extent the RACT permit contains more stringent requirements.

Subsection (c) establishes VOC emission limits. The compliance date was changed based on the anticipated publication date of the final-form rulemaking. Beginning January 1, 2012, a person may not cause or permit the emission into the outdoor atmosphere of VOCs from a flat wood paneling surface coating process, unless one of two limitations is met. The first limitation is that the VOC content of each as applied coating is equal to or less than the limit specified in Table I in § 129.52c. The final-form rulemaking adds that the VOC content requirement of Table I for all materials used on a single process line may be met by using a daily, weighted-average approach. The final-form rulemaking includes an equation for calculating the weighted average. The second limitation is that the overall weight of VOCs emitted to the atmosphere is reduced through the use of vapor recovery, incineration or another method that is acceptable under § 129.51(a). This limitation also addresses the overall efficiency of a control system, as determined through the use of the sampling and testing methods in *25 Pa. Code* Chapter 139 (relating to sampling and testing).

Subsection (d) identifies daily records that must be kept to demonstrate compliance with § 129.52c, including records of parameters and VOC content of each coating, thinner, component and cleaning solvent, as supplied, and the VOC content of each as applied coating or cleaning solvent.

Subsection (e) contains a change to the proposed recordkeeping and reporting requirements. The proposed rulemaking required that records be maintained for 2 years. The final-form provision requires that records be maintained for 2 years unless a longer period is required by 25 Pa. Code § 127.511(b)(2) (relating to monitoring and related recordkeeping and reporting requirements). Additionally, § 129.52c(e) has been amended at final to clarify that records shall be submitted to the Department upon receipt of a written request.

Under subsection (f), an owner or operator subject to § 129.52c may not cause or permit the emission into the outdoor atmosphere of VOCs from the application of flat wood paneling surface coatings, unless the coatings are applied using the methods listed in this subsection, except that an owner or operator may use another coating application method if a request is submitted in writing that demonstrates that the method is capable of achieving a transfer efficiency equivalent to, or better than, that achieved by the other methods listed in subsection (f) and is approved in writing by the Department prior to use. Three coating application methods have been added to the list for clarity: airless spray coating, air-assisted airless spray coating, and electrostatic coating. The other methods listed are rotogravure coating, curtain coating, direct roll coating, reverse roll coating, hand brush or hand roller coating, or high volume-low pressure spray coating.

Subsection (g) exempts coatings used exclusively for determining product quality and commercial acceptance and other small quantity coatings from the VOC coating content limits in Table I of § 129.52c, if the quantity of coating used does not exceed 50 gallons per year (gpy) for a single coating and a total of 200 gpy for all coatings combined for the facility and if the owner or operator of the facility requests, in writing, and the Department approves, in writing, the exemption prior to use of the coating.

Subsection (h) establishes work practices that an owner or operator of a flat wood paneling surface coating process subject to § 129.52c shall comply with, for coating-related activities.

Subsection (i) establishes work practices that an owner or operator of a flat wood paneling surface coating process subject to § 129.52c shall comply with, for cleaning materials.

Table I establishes emission limits for VOCs for flat wood paneling surface coatings, expressed in weight of VOC per volume of coating solids, as applied.

This final-form rulemaking also amends § 129.66 to extend its coverage to this rulemaking and the two other recently published surface coating CTG rulemakings namely the large appliance and metal furniture surface coating processes final-form rulemaking (published September 11, 2010) and the paper, film and foil surface coating processes rulemaking (published     Date    ). (*Editor's note:* Date is date of publication, which is expected to precede publication of this rulemaking by several weeks.) The section will be similarly updated in later CTG rulemakings. Existing § 129.66 establishes a one-year compliance date for owners or operators of a source newly subject to the requirements of § 129.52, the existing surface coatings regulation, as a result of revised applicability requirements. The amendment in the final-form rulemaking is intended to ensure that this flexibility is extended to owners and operators of sources newly subject to the expanding collection of surface coating regulations resulting from these CTG rulemakings. The amendment will allow compliance for sources newly subject to the

requirements because of revised applicability requirements within one year or by the compliance date specified in the new regulation, whichever is later.

## **F. Summary of Major Comments and Responses**

The Board approved publication of the proposed rulemaking at its meeting of September 15, 2009. The proposed rulemaking was published at 39 *Pa.B.* 6061 (October 17, 2009). Three hearings were held on November 17, 19, and 20, 2009, in Harrisburg, Norristown and Pittsburgh, respectively. The public comment period closed on December 21, 2009.

Public comments were received from one commentator, CraftMaster Manufacturing, Inc. The Independent Regulatory Review Commission (IRRC) also provided comments.

### *Other regulatory programs*

CraftMaster submitted several comments regarding concurrent applicability of the EPA's 2003 Wood Building Products (WBP) National Emission Standard for Hazardous Air Pollutants (NESHAP). The Board responds that the final-form rulemaking is based on the 2006 EPA CTG for Flat Wood Paneling Coatings; the WBP NESHAP does not guide or override this rulemaking, nor do the MACT, BAT or NSR programs. While there may be overlapping regulation of certain product subcategories, a facility's surface coating processes will be subject to the final-form rulemaking if the operation is for one of the product types that is defined in § 121.1 and has a limit set in § 129.52c, Table I. State regulations to control VOC emissions from flat wood paneling surface coating processes with RACT are required under the CAA. The EPA's WBP NESHAP is applicable only to major sources of hazardous air pollutants (HAP), and this final-form rulemaking is applicable to processes that have actual VOC emissions of 15 lbs/day or more from all flat wood paneling operations listed in Table 1, including cleaning operations. Therefore, smaller facilities would be subject to the final-form rulemaking and, by reducing VOCs, may also be reducing a significant amount of HAPs.

CraftMaster also suggested that surface coating operations already subject to the Maximum Available Control Technology (MACT) or Best Available Technology (BAT) programs, or to the emissions offset provisions of Pennsylvania's New Source Review (NSR) program, should not be subject to the final-form rulemaking. The Board responds that MACT regulations are for controlling HAPs and VOCs that are HAPs, not for controlling all VOCs as precursors of ground-level ozone, as the final-form rulemaking does. With regard to BAT, surface coating operations that have been subject to BAT may also meet the requirements of the final-form rulemaking because the BAT determined at the time of the review may be as stringent as, or more stringent than, the requirements of this final-form rulemaking. However, if the BAT is less stringent than the requirements of this final-form rulemaking, the surface coating operation must comply with the more stringent requirements. With regard to NSR, the EPA accepts the Commonwealth's BAT determinations and recent NSR applicability determinations as fulfillment of RACT for facilities that are *not* covered by a CTG, for which controls are installed after December 9, 1997 (62 FR 64722), the date that the EPA approved the Department's NSR program, because this date draws the line between an existing source subject to RACT and a new source subject to NSR.

### *VOC content limit*

CraftMaster commented that the “as applied” VOC limit in Table I should be applicable to an entire surface coating operation (SCO) or category of Flat Wood Paneling Product processed on a SCO, on a weighted-average basis of all coatings applied, rather than to each individual coating. The Board agrees that the weighted-average approach is acceptable. The final-form rulemaking has been revised to add a provision under § 129.52c(c)(1) that allows for calculating a daily weighted average within a single surface coating process line. Also, demonstrating equivalency with the requirements in § 129.52c is allowed under § 129.51(a) in the final-form rulemaking. This weighted-average approach could be specified in a plan approval application and memorialized in a permit under the equivalency provision if a company desires to proceed in that fashion and obtains permit approval.

CraftMaster commented that a facility should be able to use "as purchased" VOC data instead of calculating "as applied" data to demonstrate compliance with the VOC content limits of Table I. Calculation of "as applied" should be limited to a situation where one or more components of a blend are not a "complying coating" on its own. The Board agrees that “as purchased” VOC data can be used under specific circumstances instead of “as applied” data. If there is no thinning or mixing of additional regulated VOCs with the as purchased material, but only blending of two or more compliant coatings (each less than 2.9 lbs VOC/gal coating solids), the company could make a statement in its recordkeeping documents to this effect and not provide additional calculations. However, if mixing of thinners or other noncompliant VOC-containing coatings with the “as purchased” material occurs, the “as applied” coating content must be calculated. The Department reserves its right, of course, to sample a coating, even if the company has provided a written statement that the coating is compliant as mixed.

### *Recordkeeping*

Both CraftMaster and IRRC commented on the daily recordkeeping requirement. CraftMaster stated that it is an unnecessary burden with no known benefit and that the company should be allowed to continue on its monthly recordkeeping basis. IRRC requested that the Board explain the basis and need for requiring daily recordkeeping. Both commented on the cost of daily recordkeeping. The Board disagrees with the commentators’ comments regarding recordkeeping. The Board is requiring daily recordkeeping because the applicability for the final-form rulemaking is based on emissions equal to or greater than 15 lbs/day of VOC before control. Therefore, in order to demonstrate inclusion or exemption from the regulation, and to enable the Department to ascertain compliance at any time, daily records must be kept. Furthermore, since daily records will be necessary in order to satisfy the requirements for monthly records, the recordkeeping burden should be minimal. The Board disagrees that there are any additional costs associated with daily recordkeeping.

IRRC commented that subsection (e) is unclear as to what format the records should be maintained, and that this should be clarified in the final-form regulation. The Board respectfully disagrees. Requiring regulated facilities to maintain records is a standard requirement. This requirement is found in many Board-approved regulations, including § 129.52(g) (relating to surface coating processes), for instance. The owners and operators of regulated sources have not



had difficulty understanding or complying with this requirement. No changes have been made to the final-form rulemaking concerning format in response to this comment.

IRRC commented that the Board should clarify whether submission of the records required by § 129.52c(e) will be requested by the Department in writing or orally. Final-form § 129.52c(e) has been revised to specify that the records shall be submitted to the Department upon receipt of a written request.

#### *Compliance methods and related costs*

CraftMaster stated that airless sprays are used in many instances and that, therefore, the requirements regarding coating application methods should be removed. IRRC requested that the Board consider adding airless sprays to the list of acceptable coating application methods. The Board agrees that airless sprays can be used for flat wood paneling surface coating processes. The proposed rulemaking would have allowed other coating application methods to be approved in § 129.52c(f)(7) with written requests, if the method would achieve an equivalent or better transfer efficiency than those in paragraphs (1)-(6); however, for ease of permitting and enforcement, the Board has added airless, air-assisted airless and electrostatic coating methods to §129.52c(f) in the final-form rulemaking.

CraftMaster estimated that for one surface coating operation the capital costs to install a Regenerative Thermal Oxidizer (RTO) control device would be \$3.46 million, with annual costs of \$1.51 million. CraftMaster commented that the cost per ton of VOCs controlled is \$43,000, which they state is far greater than any known RACT cost-effectiveness criteria, and that NO<sub>x</sub> emissions associated with operating the RTO are estimated at 4.7 tons per year. IRRC asked that the Board address in the Order the fiscal impact concerns raised by CraftMaster. The Board appreciates the work CraftMaster staff undertook to determine the exact cost of installation of a control device. The 2006 flat wood paneling CTG does not address costs for RTOs or other add-on control devices, only costs for lower VOC-content coatings. The estimated annual cost for the owners or operators of CraftMaster for changing the company's noncomplying interior flat wood paneling coating operations over to compliant material would be \$10,070 (5.3 tons VOC emissions reduced x \$1900/ton), using the emission reductions provided by CraftMaster in its comment letter and costs provided by the EPA in the CTG. The final-form rulemaking allows but does not require the installation of an add-on control device to meet the emission limitations. It is a facility owner or operator's choice whether to use compliant coatings or add-on controls. Compliant coatings are available. The Board notes that if CraftMaster should average the VOC contents of all materials used within a single surface coating process line, the facility might not have any noncompliant surface coating lines and no additional emission reductions would be required at the facility.

CraftMaster commented that the requirement to fully enclose coatings, coating-related wastes and coating-related clean-up materials handling systems should not be applicable in all instances. CraftMaster asserts that it is not technically feasible or cost effective to enclose materials where coatings are water-based "complying coatings," the cleaning material is limited to water and wastes are treated onsite. IRRC commented that the Board should explain why it is necessary to fully enclose all coatings and coating-related waste materials. The Board is not requiring a facility owner or operator to fully enclose all coatings, coating-related wastes and coating-related

clean-up materials handling systems. Neither the proposed nor final-form rulemaking requires this. The requirements are to: (1) store VOC-containing materials in closed containers; (2) minimize spills of VOC-containing materials and clean up spills immediately; (3) convey VOC-containing materials from one location to another in closed pipes or containers; (4) ensure that mixing and storage containers used for VOC-containing materials are kept closed at all times, except when depositing or removing these materials; and (5) minimize VOC emissions during cleaning of storage, mixing and conveying equipment. The work practice requirements for coating-related activities and for cleaning materials in the final-form rulemaking are taken from the 2006 CTG. The Board does not anticipate increased cost due to the implementation of work practice standards for cleaning materials. The implementation of the work practices for cleaning materials is expected to result in a net cost savings. The recommended work practices should reduce the amount of cleaning materials used by reducing the amount of cleaning materials lost to evaporation, spillage or waste. The EPA did not estimate any costs associated with work practice standards in the CTG. On page 7 of the CTG, the EPA states: “To provide structure and consistency to their work practices, facilities can develop and implement a work practice plan. The work practice plan is a proven and traditional approach for cleaning that is easily adopted and managed by various industries, including flat wood paneling coatings.” (*Emphasis added*)

### *Definitions*

IRRC commented on the second sentences in the definitions of the terms “*decorative interior panel*,” “*exterior siding*” and “*exterior trim*.” IRRC stated that these sentences contained nonregulatory language and would be more appropriate in this Order than in the definition. The Board respectfully disagrees. The sentences provide useful information that will help the regulated community, environmental community and Department staff be better able to identify the type of product they are dealing with. No changes were made to the final-form rulemaking as a result of this comment.

IRRC commented on the definitions of “*MDF-Medium density fiberboard*,” which contains the phrase “engineered wood panel product,” and “*tileboard*,” which contains the phrase “premium interior wall paneling product.” IRRC recommended that the Board define these terms in the final-form rulemaking to improve clarity. The Board agrees and has amended § 121.1 in the final-form rulemaking to include definitions for these terms.

## **G. Benefits, Costs and Compliance**

### **Benefits**

Implementation of the final-form rulemaking will benefit the health and welfare of the approximately 12 million humans, animals, crops, vegetation and natural areas of this Commonwealth by reducing emissions of VOCs, which are precursors to ground-level ozone air pollution. Although the final-form rulemaking is designed primarily to address ozone air quality, the reformulation or substitution of coating products to meet the VOC content limits applicable to users may also result in reduction of HAP emissions, which are also a serious health threat.

The final-form rulemaking provides as one compliance option that inks, coatings and adhesives used on or applied to flat wood paneling products manufactured in this

Commonwealth meet specified limits for VOC content, usually through substitution of low VOC-content solvents or water for the high VOC-content solvents. The reduced levels of high VOC-content solvents will also benefit water quality through reduced loading on water treatment plants and in reduced quantities of high VOC-content solvents leaching into the ground. Owners and operators of affected flat wood paneling surface coating process facilities may also reduce VOC emissions through the use of add-on controls, or a combination of complying coatings and add-on controls.

The EPA estimates that implementation of the recommended control options for noncomplying flat wood paneling surface coating processes will result in additional reductions of VOC emissions of approximately 20% for interior flat wood paneling coating processes and 80% for exterior siding processes.

In this Commonwealth, approximately 10 flat wood paneling surface coating operations combined to emit an estimated total of 248 tons of VOCs in 2009. The highest emitting of these facilities indicated in its comments on the proposed rulemaking that it potentially has five flat wood paneling surface coating operations subject to the regulation that emitted 99.4 tons of VOC in 2008. This company also reported 78 tons of VOCs to the Department in 2009. The remaining nine facilities emitted a total of 26 tons of VOCs in 2009. This highest-emitting facility indicated that its anticipated reductions from possibly noncomplying surface coating operations would range from 5.3 to 9 tons per year. Should this company average the VOC contents within a single surface coating process line, the facility might not have any noncompliant surface coating process lines, and no additional emission reductions would be required at the facility. Based upon that assumption, and assuming all emissions at the remaining nine facilities are from noncomplying flat wood paneling surface coating processes, the maximum anticipated additional annual VOC emission reductions as a result of this final-form rulemaking are approximately 5 tons (26 tons x 20%) if all subject processes are for interior paneling to 21 tons (26 tons x 80%) if all subject processes are for exterior siding.

### **Compliance Costs**

The costs of complying with the final-form new requirements include the cost of using alternative product formulations, including low VOC-content or water-based inks, coatings and adhesives, and low VOC-content or water-based cleanup solvent products, and the cost of using add-on controls. Based on information provided by the EPA in the CTG, the cost effectiveness of reducing VOC emissions from flat wood paneling surface coating processes is estimated to range from \$1,900 for interior paneling coating processes to \$2,600 for exterior siding coating processes per additional ton of VOC emissions reduced. This range is based on the use of low VOC-content coatings for control.

The total estimated anticipated annual costs to noncomplying facilities ranges from \$9,500 (5 tons VOC emissions reduced x \$1,900/ton reduced) to \$54,600 (21 tons VOC emissions reduced x \$2,600/ton reduced). These costs are negligible compared to the improved public health and environmental benefits that will be gained from this measure.

The implementation of the work practice requirements for cleaning materials is expected to result in a net cost savings. The recommended work practices should reduce the amount of

cleaning materials used by reducing the amount of cleaning materials lost to evaporation, spillage and waste.

### **Compliance Assistance Plan**

The Department plans to educate and assist the public and regulated community in understanding the new requirements and how to comply with them. This will be accomplished through the Department's ongoing compliance assistance program.

### **Paperwork Requirements**

The owners and operators of affected flat wood paneling surface coating processes will be required to keep daily operational records of information for coatings and cleaning solvents sufficient to demonstrate compliance, including identification of materials, VOC content and volumes used. The records must be maintained for at least 2 years, and in some cases 5 years, and must be submitted to the Department upon written request. Persons claiming the small quantity exemption or use of exempt coating are required to keep records demonstrating the validity of the exemption. Persons seeking to comply through the use of add-on controls are required to meet the applicable reporting requirements specified in Chapter 139.

### **H. Pollution Prevention**

The Federal Pollution Prevention Act of 1990 established a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to the owners and operators of facilities that permanently achieve or move beyond compliance. This regulation has incorporated the following pollution prevention incentives:

The final-form amendments will assure that the citizens and the environment of this Commonwealth experience the benefits of reduced emissions of VOCs and HAPs from flat wood paneling surface coating processes. Although the final-form amendments are designed primarily to address ozone air quality, the reformulation or substitution of coating products to meet the VOC content limits applicable to users may also result in reduction of HAP emissions, which are also a serious health threat. The final-form rulemaking provides as one compliance option that coatings used on or applied to flat wood paneling products manufactured in this Commonwealth meet specified limits for VOC content, usually through substitution of low VOC-content solvents or water for the high VOC-content solvents. The reduced levels of high VOC-content solvents will also benefit water quality through reduced loading on water treatment plants and in reduced quantities of high VOC-content solvents leaching into the ground. Owners and operators of affected flat wood paneling surface coating process facilities may also reduce VOC emissions through the use of add-on controls, or a combination of complying coatings and add-on controls.

## **I. Sunset Review**

This regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

## **J. Regulatory Review**

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on October 6, 2009, the Department submitted a copy of the proposed rulemaking, published at 39 *Pa.B.* 6061, to IRRC and to the House and Senate Environmental Resources and Energy Committees (Committees) for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the Committees were provided copies of the comments received during the public comment period, as well as other documents when requested. In preparing the final-form rulemaking, the Department considered the comments received from IRRC, the Committees and the public.

Under section 5.1(j.2) of the Regulatory Review Act (71 P.S. § 745.5a(j.2)), on (date), this final-form rulemaking was deemed approved by the Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on (date), and approved the final-form rulemaking.

## **K. Findings of the Board**

The Board finds that:

- (1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202) and regulations promulgated thereunder at *1 Pennsylvania Code* §§ 7.1 and 7.2.
- (2) At least a 60-day public comment period was provided as required by law, and all comments were considered.
- (3) These regulations do not enlarge the purpose of the proposal published at 39 *Pa.B.* 6061.
- (4) These regulations are necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this order.
- (5) These regulations are necessary to attain and maintain the ozone National Ambient Air Quality Standards (NAAQS) and to satisfy related Clean Air Act requirements.

## **L. Order of the Board**

The Board, acting under the authorizing statutes, orders that:

- (a) The regulations of the Department of Environmental Protection, 25 *Pennsylvania Code*, Chapters 121 and 129 are amended by amending §§ 121.1, 129.51 and 129.66, and adding § 129.52c to read as set forth in Annex A.
- (b) The Chairperson of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.
- (c) The Chairperson of the Board shall submit this order and Annex A to IRRC and the Committees as required by the Regulatory Review Act (71 P. S. §§ 745.1—745.12).
- (d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.
- (e) These final-form amendments will be submitted to the U.S. EPA as an amendment to the Pennsylvania SIP.
- (f) This order shall take effect immediately upon publication in the *Pennsylvania Bulletin*.

JOHN HANGER  
Chairperson