

Regulatory Analysis Form		This space for use by IRRC
(1) Agency Environmental Protection		RECEIVED 2003 AUG -6 PM 2: 55 INDEPENDENT REGULATORY REVIEW COMMISSION
(2) I.D. Number (Governor's Office Use) 7-371		IRRC Number: 2238
(3) Short Title Architectural and Industrial Maintenance (AIM) Coatings		
(4) PA Code Cite 25 PA Code Chapter 130, Subchapter C	(5) Agency Contacts & Telephone Numbers Primary Contact: Michele Tate, 783-8727 Secondary Contact: Louis Guerra, 783-8727	
(6) Type of Rulemaking (Check One) <input type="checkbox"/> Proposed Rulemaking <input checked="" type="checkbox"/> Final Order Adopting Regulation <input type="checkbox"/> Final Order, Proposed Rulemaking Omitted	(7) Is a 120-Day Emergency Certification Attached? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes: By the Attorney General <input type="checkbox"/> Yes: By the Governor	
(8) Briefly explain the regulation in clear and nontechnical language. The final-form rulemaking adopts volatile organic compound (VOC) standards for 48 types of coatings, including interior and exterior house paints and industrial maintenance coatings. The VOC content limits for the affected coatings are more restrictive than the limits in the federal regulation for architectural and industrial maintenance (AIM) coatings adopted in 1998. Definitions of terms are included in the final-form rulemaking.		
(9) State the statutory authority for the regulation and any relevant state or federal court decisions. This action is being taken under the authority of Section 5 of the Air Pollution Control Act (35 P.S. § 4005.)		

Regulatory Analysis Form

(10) Is the regulation mandated by any federal or state law or court order, or federal regulation? If yes, cite the specific law, case or regulation, and any deadlines for action. The final-form regulation is not specifically mandated by law, court order or regulation.

The final-form regulation is part of the Commonwealth's efforts, in conjunction with the other states in the Ozone Transport Region, to achieve additional reductions of volatile organic compound emissions. These reductions are necessary for continued progress toward attainment and maintenance of the health-related ozone standards in Pennsylvania.

(11) Explain the compelling public interest that justifies the regulation. What is the problem it addresses?

Large areas of the Commonwealth continue to exceed the health-based standards for ground-level ozone. Additional reductions of volatile organic compounds are necessary to continue to move toward attainment in those areas where the ozone levels exceed the National Ambient Air Quality Standards (NAAQS). This regulation will help the Commonwealth achieve and maintain the health-based standards for ozone, which is in the best interest of the public.

The final-form requirements will also reduce individual exposure to a variety of volatile solvents, hazardous air pollutants (HAPs), and chemicals found in AIM coatings.

(12) State the public health, safety, environmental or general welfare risks associated with non-regulation.

When ground-level ozone is present in concentrations in excess of the federal health-based standards, public health is adversely affected. The federal Environmental Protection Agency has concluded that there is an association between ambient ozone concentrations and increased hospital admissions for respiratory ailments, such as asthma. Further, although 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 ambient ozone while engaged in activity that involves physical exertion. Though such symptoms are often temporary, repeated exposure could result in permanent lung damage.

The implementation of additional measures to address the ozone air quality nonattainment in Pennsylvania is necessary to protect the public health.

(13) Describe who will benefit from the regulation. (Quantify the benefits as completely as possible and approximate the number of people who will benefit.)

The final-form regulations will result in improved air quality for all citizens of the Commonwealth by reducing ozone precursor emissions. The reduction in ozone precursor emissions will result in improved ozone air quality throughout Pennsylvania.

The final-form regulations will result in reduced levels of hazardous air pollutants throughout Pennsylvania. In addition, the final-form regulation will reduce citizen exposure to a variety of solvents, including HAPs, that are used in certain AIM coatings.

Regulatory Analysis Form

(14) Describe who will be adversely affected by the regulation. (Quantify the adverse effect as completely as possible and approximate the number of people who will be adversely affected.)

The final-form regulation will require that some manufacturers modify certain products to meet the VOC content limits in the final-form regulation. Throughout the development of the final-form regulation, Pennsylvania and the other OTC jurisdictions have worked closely with the manufacturers to assure that the industry is aware of the proposal. The major trade association has opposed the final-form rulemaking. However, certain coating suppliers have indicated that the final-form VOC content limits are acceptable and within existing technologies.

(15) List the persons, groups or entities that will be required to comply with the regulation. (Approximate the number of people who will be required to comply.)

Anyone who manufactures, supplies, sells, offers for sale, blends or repackages, applies or solicits the application of AIM products after January 1, 2005 will be required to comply with the requirements.

The number of manufacturers is unknown. Major national coating suppliers, PPG Industries, Behr Process Corporation and ICI Glidden have facilities in Pennsylvania. In addition, there are numerous smaller coating manufacturers, including Finnaren & Haley Paints and MAB Paints.

(16) Describe the communications with and input from the public in the development and drafting of the regulation. List the persons and/or groups who were involved, if applicable.

The member states of the Ozone Transport Commission met over 18 months with representatives of AIM coating manufacturers and the National Paint and Coating Association (NPCA) prior to proposing the rulemaking.

The production of certain low AIM coatings will require some new product development, but much of this work has already been undertaken because of similar regulatory efforts in California. Certain coating manufacturers have indicated that the final-form limits are within the limits of current technology.

The final-form revisions were discussed with and approved by the Air Quality Technical Advisory Committee at its February 20, 2003 meeting. In addition, the final-form rulemaking was reviewed by the Small Business Compliance Advisory Committee on April 23, 2003. The Small Business Compliance Advisory Committee supported the final-form rulemaking and endorsed the Department's determination that the final-form rulemaking should not include averaging provisions.

(17) Provide a specific estimate of the costs and/or savings to the regulated community associated with compliance, including any legal, accounting or consulting procedures which may be required.

It is estimated, based on an analysis by E.H. Pechan & Associates completed for the OTC, that the reduction of VOC content of the affected AIM coatings will cost approximately \$6,400 per ton of VOC emissions reduced. Annual emission reductions are estimated to be approximately 10,200 tons. Total cost to the regulated community and consumers in the Commonwealth could be up to \$65 million. Because identical VOC content limits for AIM coatings are already in effect in many areas of California, it is anticipated that much of the research and development effort and associated costs will be absorbed in the California market and that the cost to Pennsylvanians will be significantly less.

An analysis conducted by Aberdeen Proving Grounds indicates that low VOC coatings are available that will result in savings of approximately \$1.76 per gallon compared with higher VOC coatings.

Regulatory Analysis Form

(18) Provide a specific estimate of the costs and/or savings to local governments associated with compliance, including any legal, accounting or consulting procedures which may be required.

The final regulations are expected to impose no additional direct costs on local governments.

If, however, a local government purchases affected AIM coatings, additional costs commensurate with those for the private sector may be experienced.

(19) Provide a specific estimate of the costs and/or savings to state government associated with the implementation of the regulation, including any legal, accounting or consulting procedures which may be required.

To the extent that state government purchases AIM coatings, cost will be commensurate with those the private sector will experience.

Nominal costs will be experienced by the Commonwealth to assist in providing training, outreach and assistance to the regulated community. No new staff resources are anticipated to be necessary.

Regulatory Analysis Form

(20) In the table below, provide an estimate of the fiscal savings and cost associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

	Current FY Year	FY +1 Year	FY +2 Year	FY +3 Year	FY +4 Year	FY +5 Year
SAVINGS:	\$	\$	\$	\$	\$	\$
Regulated Community	0.00	0.00	0.00	0.00	0.00	0.00
Local Government	0.00	0.00	0.00	0.00	0.00	0.00
State Government	0.00	0.00	0.00	0.00	0.00	0.00
Total Savings	0.00	0.00	0.00	0.00	0.00	0.00
COSTS:						
Regulated Community	0.00	0.00	65M	65M	65M	65M
Local Government	0.00	0.00	0.00	0.00	0.00	0.00
State Government	0.00	0.00	0.00	0.00	0.00	0.00
Total Costs	0.00	0.00	65M	65M	65M	65M
REVENUE LOSSES:						
Regulated Community	0.00	0.00	0.00	0.00	0.00	0.00
Local Government	0.00	0.00	0.00	0.00	0.00	0.00
State Government	0.00	0.00	0.00	0.00	0.00	0.00
Total Revenue Losses	0.00	0.00	0.00	0.00	0.00	0.00

(20a) Explain how the cost estimates listed above were derived.

The costs are based on data developed by the California Air Resources Board (CARB) that indicate, for the similar program in California, emission reductions costs are approximately \$6,400 per ton. This estimate includes potential research and development costs to the coating manufacturers. To the extent possible, coating manufacturers are likely to pass these costs on to consumers. The E.H. Pechan & Associates indicated in its report, "Control Measure Development Support Analysis of Ozone Transport Commission Model Rules," (March 31, 2001) that the final-form AIM regulation will reduce emissions by approximately 1.7 pounds per person per year. Assuming there are approximately 12 million people in Pennsylvania, emission reductions of approximately 10,200 tons per year are expected, at a cost of up to \$65 million per year.

Regulatory Analysis Form

(20b) Provide the past three year expenditure history for programs affected by the regulation.

Program	FY-3	FY-2	FY-1	Current FY
Environmental Protection Operations (160)	\$71,402,000	\$76,018,000	\$75,074,000	\$76,323,000
Environmental Program Management (161)	\$40,200,000	\$41,471,000	\$43,354,000	\$44,224,000

(21) Using the cost-benefit information provided above, explain how the benefits of the regulation outweigh the adverse effects and costs.

The final regulation may result in estimated annual costs of up to \$65 million.

However, these costs may be overestimated. As more research is conducted to develop these lower VOC coatings, unit costs are expected to decrease, and savings, in a competitive market, will be passed on to the consumer.

These emission reductions are necessary for Pennsylvania to attain and maintain the health-based ozone air quality standards.

(22) Describe the nonregulatory alternatives considered and the costs associated with those alternatives. Provide the reasons for their dismissal.

Non-regulatory options are not available.

This final rulemaking is part of the Commonwealth's efforts to achieve emission reductions necessary to achieve and maintain the health-based ozone air quality standards. In order for the emissions reductions to be included in the state implementation plan (SIP), the emission reductions must be enforceable. Regulatory requirements are necessary to assure this enforceability.

The Department has added a variance provision to the final-form regulation. This provision will allow a manufacturer to seek a variance from the VOC content limits if the manufacturer can demonstrate that compliance is technologically infeasible.

Regulatory Analysis Form

(23) Describe alternative regulatory schemes considered and the costs associated with those schemes. Provide the reasons for their dismissal.

There are no other regulatory schemes available that will achieve the level of emission reductions necessary.

(24) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulation.

There is a federal AIM regulation, adopted in 1998, that addresses these materials. Emission reductions from the federal AIM regulation were counted on as a part of the Pennsylvania program to attain and maintain the ozone ambient air quality standards. However, the federal AIM regulation did not provide the anticipated level of emission reductions necessary.

The VOC emission reductions that will result from this regulation will help reduce ozone air quality and protect public health.

(25) How does the regulation compare with those of other states? Will the regulation put Pennsylvania at a competitive disadvantage with other states?

The final-form regulations are part of a strategy for Pennsylvania and the other jurisdictions in the OTR to attain and maintain the health related ozone NAAQS. Among the most important considerations for the coating manufacturers is that the states in the OTR develop regulations with consistent limits. This will enable the manufacturers to produce a single product for the region rather than having to deal with a potential "patchwork" of programs.

Pennsylvania industry will not be put at a disadvantage by the final-form regulation. Manufacturers will be able to continue to market existing noncomplying products outside of Pennsylvania, but will be subject to the same requirements as any other manufacturer that markets in Pennsylvania.

(26) Will the regulation affect existing or proposed regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

No.

(27) Will any public hearings or informational meetings be scheduled? Please provide the dates, times, and locations, if available.

Three public hearings were held during a seventy-six day comment period

Regulatory Analysis Form

(28) Will the regulation change existing reporting, record keeping, or other paperwork requirements? Describe the changes and attach copies of forms or reports which will be required as a result of implementation, if available.

No. The regulation will not change existing reporting requirements. New reporting requirements are specified in the final-form regulation, but no specific forms are required.

The regulation will not create any major change in the reporting, recordkeeping, and paperwork requirements.

(29) Please list any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, elderly, small businesses, and farmers.

There are no special provisions.

(30) What is the anticipated effective date of the regulation; the date by which compliance with the regulation will be required; and the date by which any required permits, licenses or other approvals must be obtained?

The regulation will be effective on the date of publication as final rulemaking in the *Pennsylvania Bulletin*. The requirements would become applicable to all affected coatings manufactured after January 1, 2005.

No special permits or licenses are required.

(31) Provide the schedule for continual review of the regulation.

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.

**Architectural and Industrial Maintenance (AIM) Coatings
Comment and Response Document**

February 27, 2003

**Bureau of Air Quality
Department of Environmental Protection**

The Environmental Quality Board (Board) published notice of the public comment period and public hearings for the Architectural and Industrial Maintenance (AIM) coating proposed rulemaking in the *Pennsylvania Bulletin* on December 15, 2001 (31 Pa.B. 6807). The Board held three public hearings on the proposal at the following Regional Offices of the Department of Environmental Protection:

January 15, 2002

DEP Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA

January 18, 2002

DEP Southcentral Regional Office
Susquehanna River Conference Room
909 Elmerton Ave.
Harrisburg, PA

January 23, 2002

DEP Southeast Regional Office
Suite 601 Lee Park
555 North Lane
Conshohocken, PA

The public comment period for the AIM coating proposed rulemaking closed on February 22, 2002. Testimony received during the public hearings and written comments received during the public comment period are summarized in this comment and response document. The identity of each commentator is indicated by the assigned number(s) in parentheses after each comment.

This is a list of corporations, organizations and interested individuals from whom the Environmental Quality Board has received comments regarding the above referenced regulation.

ID	Name/Address	Zip	Submitted 1 pg Summary	Provided Testimony	Req Final Rulemaking
1	Mr. Robert Nelson Senior Director Environmental Affairs National Paint and Coating Association 1500 Rhode Island Avenue, NW Washington, DC	20005		X	
2	Mr. James Sell Senior Counsel National Paint and Coating Association 1500 Rhode Island Avenue, NW Washington, DC	20005	X	X	
3	Mr. Geoff Crenson Mr. Thomas Shallow Roof Coatings Manufacturers Association (RCMA) 1156 15 th Street, NW, Suite 900 Washington, DC 20005			X	
4	Mr. Robert Gross Manager, Environmental Stewardship PPG Architectural Finishes, Inc. 151 Colfax Street Springdale, PA	15144		X	
5	Mr. Barry Jenkin Regulatory Affairs Benjamin Moore & Company Technical and Administrative Center 360 Route 206, P.O. Box 4000 Flanders, NJ	07836-4000			
6	Ms. Madelyn K. Harding, Manager Product Compliance and Registrations The Sherwin-Williams Company Environmental, Health and Regulatory Services 101 Prospect Avenue, N.W. Cleveland, OH	44115-1075	X	X	

ID	Name/Address	Zip	Submitted 1 pg Summary	Provided Testimony	Req Final Rulemaking
7	Mr. Michael Fiorentino Clean Air Council 105 North Front Street, Suite 106 Harrisburg, PA	17101			
8	Independent Regulatory Review Commission 14 th Floor, Harristown #2 333 Market Street Harrisburg, PA	17120			

1. **Comment:** The commentator indicates that many of the proposed volatile organic compound (VOC) limits are not technologically feasible for the wide-ranging substrates, application environments, and conditions for which a particular category of coating will be used. The final regulation should contain revised VOC content limits for “exterior flat coatings,” non-flat coatings,” “non-flat high-gloss coatings,” “floor coatings,” “lacquers,” “quick-dry coatings,” “sanding sealers,” “stains,” and “varnishes.” (1, 2, 5, 6)

Response: The Department disagrees that coatings are not available that meet the proposed VOC content limits and performance on a variety of substrates. Based on information collected by Pennsylvania and other Ozone Transport Region (OTR) states, it is clear that complying coatings are available in each of the regulated categories. Although each manufacturer may not make all coatings in each category, coatings are available in each category that comply with the proposed limits in each coating category for which the commentator has suggested a revised limit. The VOC content limits are not revised in the final-form rulemaking. However, provisions have been added to the final-form rulemaking that provide a mechanism for a person to obtain a variance from the VOC content limits if the person can demonstrate that compliance cannot be achieved because of technological infeasibility.

2. **Comment:** The proposed VOC limits for flat coatings will eliminate currently available low VOC waterborne flat coatings that can be applied in cooler months when ozone is not a problem. (1)

Response: The Department disagrees. Exterior flat coatings are currently available and are being marketed that meet the proposed limits and that are designed for application at temperatures as low as 35°F. Exterior coatings are designed for application on a variety of substrates including finished and unfinished siding, stucco, masonry, hardboard siding and similar surfaces. Interior flat coatings are available for application at temperatures above 50°F, and may be applied to new or previously painted interior wallboard, plaster, ceilings and masonry, as well as primed or previously painted wood and metal.

3. **Comment:** The commentator indicates that the proposed VOC content limits will require that the coatings be transported and stored in heated environments to prevent freezing and destruction of the product. (1, 2)

Response: The Department disagrees. Numerous low-VOC products have been introduced into the Northeast market, including ultra-low VOC products, and there is no data to support the claim that these products experience increased damage because of freezing during storage and shipping.

4. **Comment:** The testing and studies that were relied upon by CARB in setting the SCM, on which the limits in the regulation are based, were not adequately performed

or were laboratory tests that can not be relied on for determining coating efficacy. (2, 6)

Response: The Department disagrees that the testing was inadequate for determining coating efficacy. The coating testing, coupled with actual field experience and consumer use and acceptance, indicates adequate performance of the coatings.

5. **Comment:** The commentator indicates that the proposed requirement will confine virtually all exterior and unheated interior painting to the warmer months, reducing the livelihoods of painters and increasing the application of coating during the ozone season. (1, 2)

Response: The Department disagrees. Low-VOC coatings are currently available that are formulated to provide for interior and exterior application at temperatures as low as 35°F. These coatings allow extension of the coating application period well beyond the ozone season.

6. **Comment:** The proposed VOC content limitations will result in the elimination of cost effective, durable and scrub resistant interior and exterior wall and trim coatings used for high traffic/usage/impact or extreme exposure environments. (1, 2, 6)

Response: The Department agrees that certain coatings presently marketed for such uses may not comply with the proposed requirements. However, low VOC replacement products are presently being marketed that provide similar performance characteristics to the higher VOC coating materials. In the event that a manufacturer cannot produce complying products because of technological infeasibility, the manufacturer may apply in writing to the Department for a variance under the provisions of Section 130.306 that has been added to the final-form rulemaking.

7. **Comment:** The definitions of “bituminous roof coating” and “bituminous roof primer” should be revised by deleting the reference to “roofing” from the terms and definitions. The commentator indicates that the definitions in the proposed regulation, requiring labeling and formulation exclusively for roofing, will cause substantial confusion among manufacturers because some of the products are formulated for multiple purposes. (3, 8)

Response: The Department disagrees. The definitions of the terms in the proposed regulation clarified that the terms and VOC content limits apply to materials formulated and labeled exclusively for roofing application. “Bituminous roof primer” materials formulated and labeled for multiple types of uses would be limited by the “non-flat” category VOC content limit of 150 grams per liter. The definitions of the terms “bituminous roof coating” and “bituminous roof primer” are not revised in the final-form regulation.

8. **Comment:** The proposed VOC content limit of 350 grams per liter for “bituminous roofing primer” materials may result in increased VOC emissions because at lower temperatures, more low VOC content material may be required to cover the same area than would be required of higher VOC content materials. (3, 8)

Response: The Department agrees that the viscosity of the “bituminous roofing primer” materials may increase at lower temperatures and that under some circumstances material use may increase slightly. However, if this slight increase in material use does occur, it will be outside of the ozone season (May to September) and should not negatively impact the Commonwealth’s ozone reduction efforts.

9. **Comment:** The final regulation should contain revised VOC content limits for “interior wood clear and semi-transparent stains,” “interior wood varnishes,” “interior wood sanding sealers,” “exterior wood primers,” and “floor coatings”. (1, 2, 6, 8)

Response: The Department disagrees that the VOC content limits for these coating categories should be revised in the final-form rulemaking. Coatings are available that meet the VOC content limits in the regulation and are being marketed, indicating the technological feasibility of the limits and consumer acceptance of the products.

In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of new Section 130.306 that is added to the final-form rulemaking.

The VOC content limits are not revised in the final-form rulemaking.

10. **Comment:** The proposed limits for “interior wood stains,” “varnishes,” and “sanding sealers” are based on the assumption that complying coatings are available that meet the performance requirements for the subcategories. The use of coatings formulated to comply with the proposed VOC content limits will result in unacceptable performance issues including “grain raising,” “lapping,” and “panelization.” The limits in the regulation should be revised to the alternate limits suggested by the NPCA for these categories. (1, 2, 6)

Response: The Department does not agree that the proposed limits will produce unacceptable performance characteristics. Grain raising can be addressed with a light sanding between coating applications. In fact, light sanding is frequently recommended between applications of coatings. Lapping of finish materials can be addressed by proper application techniques. Complying products are being produced and marketed, indicating that the products meet customer acceptance and performance expectations and that the issues of grain raising and lapping are not significant to consumers.

Panelization is a condition in which localized cracks develop between some strip flooring while adjacent boards remain tightly bonded together with no apparent separations. Although the industry continues to express concern about panelization and its relationship to water-based finishes, the most common cause of panelization is

reportedly the failure of the owner to maintain the floor or the indoor environment properly.

One commentator indicates that there are no water-based formulations approved by the Maple Flooring Manufacturers Association (MFMA). However, this is not to say that there are no water-based products that may be used for hardwood floors. As the commentator indicates, the MFMA recommends that one "... consult with the MFMA flooring contractor and finish manufacturer to obtain procedures for sealing and finishing...with water-based products." There is no indication that water-based products are not appropriate, only that the finisher should be aware and use proper procedures.

In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of a new Section 130.306 that is added to the final-form rulemaking.

The VOC content limits for the products have not been revised in the final-form rulemaking.

11. **Comment:** The proposed VOC content limit for "primers, sealers and undercoaters" assumes that complying products are available or that suitable substitutes can be developed for the categories. (6)

Response: Numerous manufacturers produce complying formulations in this coating category. There is no indication in the product literature that these coatings are inadequate. In fact, many of the coatings are marketed with claims of exceptional performance.

In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of a new Section 130.306 that is added to the final-form rulemaking.

The Department has not changed the limits in the final-form rulemaking.

12. **Comment:** The commentator recommended that the Department revise the VOC content limit for the "floor coating" category from a limit of 250 grams of VOC per liter to 400 grams per liter. The commentator indicates that reliance on testing done in California is not appropriate because testing in California has been done only on concrete and not on wood floors such as there are in the Northeast. According to the commentator, coatings for wood floors need the penetrating qualities of solvent-borne floor paints. (6)

Response: The Department does not agree that the VOC content limit should be changed for floor coatings. Floor coatings are presently available and are being marketed that meet the limits in the final-form regulation.

In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of a new Section 130.306 that is added to the final-form rulemaking.

The VOC content limit for floor coatings has not been changed in the final-form regulation.

- 13. Comment:** The commentator suggests that the VOC content limit for “bituminous roof primer” should be changed to 500 grams per liter to achieve necessary application properties. (3)

Response: The Department disagrees. Information contained in the California Air Resources Board (CARB) “Staff Report for the Proposed Suggested Control Measure for Architectural Coatings” indicates that bituminous roofing primers meeting the limit of 350 grams currently account for in excess of 50 percent of the market share in California. This strongly indicates that materials that meet the limit of 350 grams per liter are readily available. The final-form regulation has not been changed to revise the VOC content limit for bituminous primers.

- 14. Comment:** The commentator recommended the addition of a separate category for “exterior wood primers, sealers and undercoaters” with a VOC content limit of 350 grams per liter, or as an alternative, a revision to the definition of “specialty primer” to include coatings “recommended for application to exterior wood surfaces.” The commentator indicates that this change is necessary to allow the use of solvent borne primers on hardboard products to prevent water penetration. (6)

Response: A number of coating manufacturers produce complying products in the “primer, sealer and undercoater” category, including products for professional use. Certain of these complying products are for use on new or unpainted wood/wood-based products. The commentator has not provided any evidence to indicate that complying formulations that provide acceptable performance are not feasible. The revision suggested by the commentator is not included in the final-form regulation.

- 15. Comment:** The commentator indicates that many coatings will take longer to dry and cure in humid or colder weather leaving the coating more vulnerable to dirt pickup and complete failure. (1)

Response: The Department disagrees that this is a concern. Typically, the time required for the drying of water-based coatings is significantly less than the drying time for solvent based materials. When the materials are applied according to manufacturers specifications, the finish quality and durability are satisfactory.

- 16. Comment:** The commentator questioned why the Environmental Quality Board proposed a VOC content limit of 340 grams per liter for industrial maintenance (IM) coatings instead of the limit of 250 grams per liter limit in the OTC model rule. (8)

Response: The OTC model rule contained the option for the states to set the VOC content limit for IM coatings at 340 grams per liter. This limit is also an optional

limit in certain areas of California, such as San Francisco, where cooler, damper weather conditions exist. The Environmental Quality Board proposed the limit and retained it in the final-form rulemaking because of the need for IM coatings that can be applied in cooler and damper weather conditions as might be experienced in Pennsylvania.

- 17. Comment:** The proposed solvent content restrictions will result in poorer performing, less durable coatings, and in some cases will compromise effective lower solvent waterborne coatings that have been developed to replace higher solvent coatings. (1, 2)

Response: The Department disagrees. Although the coatings industry has provided some information concerning performance and durability of low VOC coatings, the information is subjective and does not empirically demonstrate that the reformulated coatings do not perform adequately. Numerous coating manufacturers produce complying coatings that are described in the manufacturers' product literature and in trade publications as providing exceptional film durability, and having high hiding power, resistance to fading and other desirable characteristics.

- 18. Comment:** The commentator indicates that the proposed VOC content limits will result in the need for more frequent application of coatings or the application of several coats of finish material when a single application of a coating formulated at a higher VOC content might have been satisfactory. This could result in increased VOC emissions rather than reducing emissions. (1, 2, 5, 6)

Response: The Department disagrees that the proposed VOC content limits will result in increased VOC emissions resulting from the need for more frequent application of coatings due to inadequate coating performance. Information available for products currently available that meet the proposed VOC content limits indicates that the products have application and performance characteristics equivalent to high VOC content products. The commentator has not provided technical data supporting the contention that complying coatings will result in increased VOC emissions.

- 19. Comment:** The commentator indicates that many coatings will be difficult to apply because of the dry time, composition, and increased vulnerability to slight environmental changes. (1, 2)

Response: The Department disagrees that the level of difficulty of coating application and other factors will be adversely affected by the proposed VOC content limitations. Information from the Sherwin-Williams web site regarding latex (water-based) coatings indicates:

“Latex paints combine the longest-lasting finish with the best gloss retention. Sherwin-Williams latex paints are easy to work with, dry quickly and are extremely durable. Do-it-yourselfers favor them for almost any painting project.”

When the complying products are used according to manufacturers' specifications, the user/consumer should not notice differences.

- 20. Comment:** The proposed rulemaking will result in the elimination of small volume specialty coatings that are designed to meet special needs, such as anti-graffiti coatings. (1, 2)

Response: The Department disagrees. Water-based, complying coatings are available in all of the categories for which standards are established in Table 1. Although some manufacturers may be required to reformulate products to meet the VOC content standards, the reformulations are feasible. For every category of coatings for which limits are established in Table 1, complying formulations are available. The VOC content limits in Table 1 have not been changed in the final-form rulemaking.

- 21. Comment:** The proposed rulemaking will result in the reduction of availability of colors for interior and exterior coatings and gloss levels. (1, 2)

Response: The Department disagrees. Coatings that meet the VOC content limits are available in all coating categories. The commentator has not provided data that indicates that a broad range of coating colors and sheens will not be available to meet the limits in Table 1. Information does indicate that complying products are available in interior and exterior finishes in a variety of gloss levels and a full range of colors.

For example:

Data sheets for Pittsburgh Paint's Pure Performance© interior latex paints formulated at a level of zero VOC (exclusive of colorants) indicate that the coating can be colored in hundreds of colors. The same company's Manor Hall© coating is available in a high gloss finish formulated at a VOC content of less than 150 grams per liter (g/l). The VOC content limits for these two categories are 150 g/l and 250 g/l respectively.

Behr Process Corporation offers Premium Plus Paint© interior and exterior paints in finishes ranging from flat to high gloss formulated in compliance with the limitations in Table 1. The products are offered in a full spectrum of colors. In addition, Behr produces a line of complying porch and floor coatings.

- 22. Comment:** The commentator indicates that the VOC content limits proposed for interior wood sealers will result in inferior products and increased costs for consumers. (6)

Response: A review of product data sheets indicates that there are latex sealers suitable for use on interior wood substrates, all of which would comply with the proposed VOC limit for primers, sealers, and undercoaters. Compliance is technologically feasible through the use of water-based technology. The VOC content limits for interior wood sealers have not been changed in the final form-rule making.

23. Comment: The commentator indicated that the VOC content limit for semi-transparent stains should be maintained at the current federal limit of 550 grams per liter in order to assure that the level of performance of the materials is maintained. (6)

Response: The commentator has provided no data showing that reducing the VOC content limit for semi-transparent stains is not technologically feasible. The commentator has not provided data to the Department demonstrating that maintaining the VOC content limit for semi-transparent stains is necessary to assure adequate performance for these materials. In the event that formulation of a specific product is determined to be technologically infeasible, the manufacturer may request a variance for the product under the provisions of the new Section 130.306.

24. Comment: The commentator questions how low-VOC content requirements might impact the quality of the products. Specifically, the commentator questions whether reformulation of products to meet the low-VOC content might result in lower quality products that would require more frequent refinishing and, consequently, increased emissions. (8)

Response: Based on product technical literature available for low-VOC content products, the Department does not expect a significant increase in repainting as a result of the requirements. Manufacturer claims regarding the performance of the low-VOC content materials generally indicate that the reformulated products perform as well as, or better than, high-VOC content products.

25. Comment: The commentator supports the proposed rulemaking because it will result in reduction of VOC emissions and ground level ozone. In addition, the commentator indicates that the regulation will reduce exposure by citizens to hazardous air pollutants. (7)

Response: The Department agrees that the emission reductions that will result from the VOC content limits will result in reduced exposure of the citizens of the Commonwealth to hazardous air pollutants and unhealthy ground-level ozone.

26. Comment: The commentator suggests that the Department adopt a revised Table of Standards for coatings and other regulatory provisions that the commentator believes will achieve approximately 70 percent of the reductions predicted by the Department to result from the proposed regulation. (1, 2, 5)

Response: The Department agrees that the revised Table of Standards and other suggested revisions may result in emission reductions of approximately 70 percent of the VOC reductions predicted for the final-form rulemaking. However, this lower level of emission reductions would be inadequate to satisfy the emission reduction requirements necessary for the Commonwealth to achieve and maintain the health-based ozone air quality standard. Furthermore, for each of the coating categories for which the commentator has suggested revised standards, coatings are available which meet the proposed limitations and are currently being marketed. The Table of

Standards is not revised in the final rulemaking to incorporate the revised limits suggested by the commentator.

- 27. Comment:** The Department has not considered the increased emissions that will result from increased painting required because of the reduced performance of complying coatings. (1, 2, 6)

Response: The Department does not agree that there will be increased emissions resulting from the use of complying coatings. Surveys in California, where restrictive coating VOC requirements have been in place for several years, indicate no increase in per capita coating use resulting from the implementation of the low VOC requirements. Furthermore, product literature for complying coatings indicates that the materials exhibit exceptional durability and performance characteristics.

- 28. Comment:** The proposed regulation is unreasonably stringent and unnecessary for the protection of the public health, welfare and safety. (6)

Response: The Department does not agree that the regulation is unreasonably stringent or unnecessary. The emission reductions that will result from the regulation are necessary to satisfy State Implementation Plan (SIP) commitments for achievement and maintenance of the health based ozone National Ambient Air Quality Standard (NAAQS) in the Southeast Pennsylvania ozone nonattainment area and for the achievement and maintenance of the 8-hour ozone NAAQS throughout Pennsylvania.

- 29. Comment:** The record does not support the emission reduction claims of the proposed rule and the proposed rule is arbitrary and capricious. (6)

Response: The Department disagrees. The emission reduction estimates for the regulation are based on an analysis conducted for the Ozone Transport Commission (OTC) by E. H. Pechan and reported in "Control Measure Development Support Analysis of Ozone Transport Commission Model Rules (March 31, 2001)." This analysis is based on the best available information regarding AIM coating use and formulation data available to the OTC member states regarding AIM coatings.

The VOC content limits in the regulation are based on CARB's extensive analysis of AIM coatings and reflect coating technologies that are available.

- 30. Comment:** The commentator expressed concern that certain exceptions in the proposed regulation could negatively impact the VOC emission reductions anticipated from the AIM program. The commentator indicates that the effectiveness of the regulation would be enhanced if the exceptions in Section 130.303 (b) (relating to most restrictive VOC limit) were to be eliminated. (7)

Response: The exceptions to the most restrictive VOC content limits provided for in Section 130.303 are necessary to allow the use of specialized coatings where high performance characteristics are important. These exceptions are retained in the final-form rulemaking.

31. Comment: The commentator suggested that the definition of “ nonflat high gloss coating” should be revised. (1, 2)

Response: There is no functional distinction between the definition of “ nonflat high gloss coating” in the proposed rulemaking and the language submitted by the commentator. The definition has not been revised in the final-form rulemaking.

32. Comment: The commentator suggests that the definition of “specialty primer ” should be revised to include wording that would include additional coatings in this category, including coatings used to “...block odors or efflorescence...” and coatings that are “... recommended for application to exterior wood or wood-based surfaces, or for highly alkaline cement, plaster, and other cementitious surfaces.” The suggested change would increase the number of coatings included under the term, including all coatings recommended for exterior wood applications. This would result in an increase in the allowable VOC content for exterior wood coatings from 100 g/l for flat coatings to 350 g/l; for nonflat coatings, from 150 g/l to 350 g/l; and for nonflat high gloss coatings, from 250 g/l to 350 g/l. (1, 2, 6, 8)

Response: The Department does not agree that all of the suggested changes to the definition are necessary. Complying coatings are available that perform the functions recommended by the commentator without changing the definition. Changing the definition as suggested by the commentator would allow a significant number of coatings available in low VOC formulations to be regulated at higher VOC content limits. This would result in fewer emission reductions from the regulation than predicted and would jeopardize achievement of the Commonwealth’s committed emission reductions. The definition has been revised in the final-form rulemaking by the addition of the phrase “...or efflorescence...” following “... to block stains ...” in the first sentence of the definition.

33. Comment: The commentator suggests that the proposed rulemaking should be revised to include three additional specialty coatings categories: conversion varnish, thermoplastic rubber coatings and impacted immersion coatings. (1, 2)

Response: The Department agrees. Definitions and VOC content limits for these three specialty coatings categories have been added to the final-form rulemaking.

34. Comment: The commentator suggests the addition of definitions and product categories with VOC content limits for “calcimine recoaters,” “conversion varnish,” “concrete surface retarders,” “impacted immersion coatings,” “nuclear coatings,” and “thermoplastic rubber coatings.” (1, 2, 4, 6, 8)

Response: The terms, definitions and VOC content limits suggested by the commentators have been added to the final-form rulemaking.

35. Comment: The commentator suggests that the regulation should contain a coating definition and VOC content limit specifically for “nuclear coatings.” The commentator indicated that if coating reformulation is required to meet a VOC

content limit lower than the federal AIM limit, the cost of re-certifying the coatings to meet Nuclear Regulatory Commission requirements would be prohibitive. Total national usage for these coatings is less than 20,000 gallons and the emissions are not significant. (4)

Response: The Department agrees that there should be a separate coating definition and limit for “nuclear coatings” consistent with the federal requirements. A definition of “nuclear coating” and a VOC content limit, consistent with the federal rule, have been added to the final-form regulation.

- 36. Comment:** The Department should develop a separate category of products to address concerns related to professional applications. This category should contain products labeled as “professional semi-transparent wood stain,” “professional varnish,” and “professional sanding sealer”. The materials should be labeled “For Professional Use Only.” These “professional” coatings should be formulated at VOC content levels higher than those in the proposed regulation for the “non-professional” materials. (6)

Response: The Department does not agree that the regulation should contain special categories for “professional” AIM coating materials. There is no practical way to assure that these products would be sold only to “professionals.” Therefore, there would be no practical enforcement mechanism to assure that the “professional” coatings would be sold only to “professionals.” Therefore, there is no assurance that any of the coatings in the product categories would be produced at “non-professional” coating VOC content compliance levels in Table 1 and there is no assurance that the Commonwealth would meet the required emission reductions.

- 37. Comment:** One commentator recommends that the Department revise the definition of “low solids coating” to include low-solids content semi-transparent stains that do not meet the proposed definition. Another commentator recommended that the definition be revised to include water-borne clear or semi-transparent stain. (6, 8)

Response: The Department does not agree that the definition should be revised as suggested by the commentators. The changes suggested would lessen the stringency of the VOC content limitation requirements for semi-transparent stains. This would reduce the emission reduction benefits of the final-form regulation and would jeopardize Pennsylvania’s ability to meet emission reduction requirements necessary to achieve and maintain the ozone air quality standard. Semi-transparent stain formulations that meet the limits in the final-form regulation are available in the market.

In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of new Section 130.306 that is added to the final-form rulemaking.

The definition has not been changed in the final-form regulation.

38. Comment: The Department should add a definition of “shellac” to the regulation. (8)

Response: The Department has added a definition of “shellac,” a regulated category of coatings, to the final-form regulation.

39. Comment: The commentator suggests that the Department include provisions in the final rulemaking relating to variances consistent with the provisions in the Commonwealth’s recently promulgated consumer products regulation. The commentator believes that these provisions are necessary to provide equity and fairness by granting the same regulatory flexibility provided for consumer products. (1, 2, 5, 6)

Response: The Department agrees that there may be situations where a person may not be able to comply with the coating VOC content requirements because of technological infeasibility. The Department has added variance provisions to the final rulemaking to allow producers to apply for limited variances from VOC content requirements.

40. Comment: The commentator suggests that the Department revise the proposed regulation to include averaging provisions to allow coating manufacturers to utilize credits for coatings formulated below compliance levels to allow the marketing of coating that do not comply with the regulatory limits. (1, 2, 5, 6, 8)

Response: The Department disagrees that averaging provisions are necessary for manufacturers to achieve compliance with the VOC content requirements in the proposed regulation. Complying coatings are available in each category for which VOC content limits are specified. An averaging provision is not necessary for manufacturers to comply with the proposed limits. One of the commentators who supports averaging indicates in the comments that an averaging provision “...would have to ensure the availability of a sufficient amount of below compliance VOC product such that there would be no net increase [emphasis added] in VOC emissions from his products as a whole.” The purpose of this regulation is to assure VOC emission reductions, not to maintain the status quo as suggested by the commentator.

In addition, adding averaging provisions to the regulation can be extremely disadvantageous for coating manufacturers that have a limited product line with few coatings to use to generate credits for averaging. Coating manufacturers with a broad product line, especially those producing large volumes of those flat coatings that are easily formulated below the compliance levels could generate a large quantity of credits to be used to avoid having to reformulate smaller volume coatings. This could be extremely disadvantageous for a smaller coating supplier with fewer product lines to average because the manufacturer would have to incur reformulating expenses. This competitive disadvantage could result in failure of the smaller companies.

The final rulemaking does not contain averaging provisions.

41. Comment: Both the Department's Consumer Products regulation and the proposed AIM regulation are based on rules developed in California. Inclusion of an averaging provision in the Consumer Products regulation and not in the AIM regulation is arbitrary and capricious and places an unreasonable and unequal burden on the architectural coating industry. (6)

Response: The Department disagrees. Unlike the AIM regulation, the Consumer Products regulation is technology-forcing. For this reason, it is appropriate to incorporate averaging provisions as a compliance option for consumer product manufacturers. The VOC content limits in the AIM regulation are not technology forcing. Complying products are currently in the market for the regulated product categories. There is no need for averaging to meet the VOC content limits for AIM coatings.

In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of a new Section 130.306 that is added to the final-form rulemaking.

42. Comment: The commentator supports the proposed rulemaking "as is" without an averaging provision. (4)

Response: The Department agrees that an averaging provision is not appropriate. The VOC content limits for the regulated coating categories are not "technology-forcing." Coatings are presently being marketed at VOC content levels equal to or lower than the limits in the proposed regulation.

43. Comment: The commentator questioned why the Department has not included in the regulation the averaging provisions and the variance provisions that are contained in the OTC model rule on which the regulation is based. (8)

Responses: The OTC model does contain provisions for averaging. However, the language of the model rule relating to averaging provisions indicates that the averaging provisions "...shall cease to be effective on January 1, 2005, after which averaging will no longer be allowed." The averaging provisions in the model rule are intended to apply only if compliance with the low-VOC content limits in the model rule is required before January 1, 2005. Pennsylvania's regulation does not require compliance with the low VOC content limits until January 1, 2005, so the averaging provisions are not necessary.

A new Section 130.306 has been added to the final form rulemaking. This new Section 130.306 provides for a manufacturer to obtain a variance if the manufacturer can demonstrate that it is technologically infeasible to comply with the VOC content limits for a product.

44. Comment: The commentator suggests that the Department include provisions in the final-form rulemaking relating to innovative technology consistent with the provisions in the Commonwealth's recently promulgated consumer products regulation. The

commentator believes that these provisions are necessary to provide equity and fairness by granting the same regulatory flexibility that is provided for consumer products. (1, 2)

Response: The Department disagrees. The innovative technology provisions of Subchapter B of Chapter 130 (relating to consumer products) are necessary because the VOC content limitations for the products regulated in Subchapter B are technology-forcing requirements. The VOC content limitations in the proposed AIM requirements are not technology-forcing requirements. Products that meet the proposed VOC content limits for AIM coatings are presently available. The final rulemaking does not contain innovative technology provisions.

- 45. Comment:** The commentator indicated that the Department should consider adding provisions for a technology assessment to determine the appropriateness of maintaining future VOC limits. (1, 2, 6, 8)

Response: The Department disagrees. Available information indicates that there are complying formulations available in each of the regulated categories. Based on the current availability of complying formulations, there is no need for future assessments unless plans are developed to implement additional coating VOC limitations. If such plans are developed, a Technology Assessment will be appropriate.

If technological infeasibility prevents a manufacturer from producing a complying formulation for a particular product, the manufacturer may apply to the Department for a variance under the provisions of the new Section 130.306 added to the final-form regulation.

- 46. Comment:** The commentator questioned whether the Department thought it necessary to have the information required in the annual report to the Department and the criteria that the Department will use to determine when the information will be requested. (8)

Response: The reporting requirements in Section 130.305 are necessary to provide the basis for the Department to monitor coating formulation and to determine the emission impacts of the AIM regulatory program. The Department is required periodically to prepare emission inventory data for use in the development of SIPs and tracking of SIP emission reduction commitments. The frequency of the data requests and the content of the reports will be determined based on the need and/or intended use of the reported information.

- 47. Comment:** The commentator suggested that the annual reporting requirements specified in Section 130.305 would not provide an accurate database of bituminous roof primers used in Pennsylvania. For example, many who purchase these products in Pennsylvania are not direct end users, but rather distributors of private label accounts. Therefore, manufacturers of these products would have no means of knowing how much of the products it

sells either inside or outside of the Commonwealth are used within Pennsylvania. (3)

Response: The Department disagrees that manufacturers or producers will not be able to provide data regarding product sales in Pennsylvania. While there may be certain products for which it may be difficult to track sales, generally distribution and marketing systems can provide data with a level of quality for the Commonwealth to track product use and determine emissions. The provisions of Section 130.305 have not been revised in response to this comment.

- 48. Comment:** The commentator suggested that the reliance, by the Ozone Transport Region (OTR), on information developed by the California Air Resources Board (CARB) relating to coating performance is not appropriate given the dissimilar climatic conditions in California and the Northeast. (2)

Response: The Department disagrees that the climatic conditions between the two areas are so dissimilar that use of CARB's data is inappropriate. Although there are areas in California where weather conditions are generally hot and dry, there are areas that experience temperature and precipitation conditions similar to those in the Northeast.

- 49. Comment:** The commentator suggested that the reliance, by the Ozone Transport Region (OTR), on information developed by the CARB relating to coating availability and cost is not appropriate. (2, 6)

Response: The Department disagrees that it is inappropriate to use information developed by CARB relating to product availability and costs. Complying products developed for sale in the California market, which includes areas with weather conditions and product application and durability requirements similar to those in Pennsylvania, are suitable for use in Pennsylvania. The use of the cost data developed by CARB in assessing the economic impact of the suggested control measure (SCM) should not unrealistically represent the cost of compliance for Pennsylvania. In fact, the cost estimates for complying with the requirements in Pennsylvania may be lower than the costs estimated for meeting the limits proposed in the CARB SCM. Inasmuch as the limits in the CARB SCM will be implemented in the South Coast Air Quality Management District and numerous other jurisdictions in California in 2003, much of the research and development work will have been completed and the costs absorbed, absent any requirements in Pennsylvania.

- 50. Comment:** The commentator questioned how the cost data developed by the CARB relating to cost is applicable to Pennsylvania. (8)

Response: The use of the cost data developed by CARB in assessing the economic impact of the suggested control measure (SCM) should represent the upper bounds of the cost of compliance for Pennsylvania. In fact, the cost estimates for complying with the requirements in Pennsylvania may be lower than the costs estimated for

meeting the limits proposed in the CARB SCM. Inasmuch as the limits in the CARB SCM will be implemented in the South Coast Air Quality Management District and approximately 18 other jurisdictions in California in 2003, much of the research and development work will have been completed and the costs absorbed prior to implementation of any requirements in Pennsylvania.

- 51. Comment:** The economic analysis used in the development of the regulation is inaccurate. Because low coating VOC requirements have been in place in California for a number of years, it is not appropriate to use CARB's cost data to estimate costs for Pennsylvania's requirements. Pennsylvania should conduct its own independent assessment of the compliance costs for the program. (6)

Response: The Department disagrees that Pennsylvania should conduct an independent cost analysis of the AIM regulatory program. The cost data for the regulation are based on an analysis conducted for the Ozone Transport Commission (OTC) by E. H. Pechan and reported in "Control Measure Development Support Analysis of Ozone Transport Commission Model Rules." This analysis is based on the best available information regarding costs available to the OTC member states regarding AIM coatings.

Although the Pechan cost estimates for the AIM program are based on best available data, they may over-estimate the ultimate cost to Pennsylvania consumers. The VOC content limits in the proposed regulation are identical to those now in effect in approximately 17 areas of California. The Pechan estimate assumes that the research and development costs for producing complying coatings will also be expended for coating development in Pennsylvania. Inasmuch as significant research and development will have been completed for compliance with the California requirements, these costs will not be incurred for Pennsylvania and the cost in Pennsylvania may be lower, but certainly not higher, than the projected costs.

- 52. Comment:** The commentator indicates that the Department should not rely on the results of the National Technical Systems (NTS) Studies carried out in California to assess the performance of coatings. The commentator cites a number of differences between the NTS Study protocols and "the generally accepted procedure," including the method of coating application and the size of the test panels. (6)

Response: The Department agrees that there may be differences between the NTS Study protocols and evaluation methods used in other circumstances. However, the commentator has not provided information refuting the validity of the NTS Study. In fact, the protocols used for the NTS Study were agreed upon, in advance, by a group representing among others, the coating industry.

- 53. Comment:** The commentator indicated that the regulation should not include small manufacturer exemptions or delayed implementation dates for any manufacturers. The commentator indicated that the final regulation should provide a level playing field for all manufacturers. (4)

Response: The Department agrees that there should not be small manufacturer exemptions or specific delayed implementation dates. The final-form regulation does, however, include a variance provision if a manufacturer can show that compliance by the January 1, 2005 deadline is not technologically feasible.

- 54. Comment:** The regulation should provide an indefinite “sell-through” provision for coatings manufactured prior to the compliance deadline. Requiring disposal of coating materials after three years as would be required by the proposed regulation is not environmentally acceptable. (1, 2, 4, 5)

Response: The Department agrees. The Department has revised Section 130.303 (c) in the final-form regulation to allow indefinitely after January 1, 2005 the sale and use of AIM material so long as the material was formulated in compliance at the time of its manufacture.

- 55. Comment:** The sell-through provisions in Section 130.303 (c) should be revised to assure that parties do not stockpile large quantities of high VOC content coatings in advance of the compliance deadline. (7)

Response: The Department does not believe that there will be significant “stockpiling” of high VOC content products. Maintenance of high levels of inventory would be expensive. In addition, many manufacturers indicate that the low-VOC content formulations perform equally as well, or better, than high-VOC content formulations, so there is no real incentive for obtaining significant inventories of high-VOC content products.

- 56. Comment:** The regulation should provide for a technology assessment to confirm the technological feasibility of the VOC content limits in the regulation. (1, 2, 5, 6)

Response: A technology assessment is not necessary in the regulation. Complying formulations are currently available for all coating categories. If technological infeasibility prevents a manufacturer from producing a complying formulation for a particular product, the manufacturer may apply to the Department for a variance under the provisions of the new Section 130.306 added to the final-form regulation.

- 57. Comment:** The regulation should be revised to eliminate unnecessary and burdensome reporting requirements. (1, 2, 5, 6)

Response: The Department does not believe that the reporting requirements in the regulation are burdensome. The requirements do not require ongoing reporting, but rather provide the authority for the Department to obtain information from coating manufacturers when necessary. The reporting requirements are not substantively revised in the final-form rulemaking.

- 58. Comment:** The commentator, an AIM coatings manufacturer, indicates that the regulation will have significant adverse impacts on it, and the Department should use its discretionary authority to issue a rule that achieves substantial VOC emission

reductions beyond the National AIM rule, without causing serious adverse impact on potential sales of certain products. (6)

Response: The Department has added a new Section 130.306 to the final-form rulemaking. Section 130.306 provides the opportunity for a manufacturer to request a variance from the VOC content limits for products for which the manufacturer can show that compliance is technologically infeasible. By obtaining a variance, a manufacturer may continue to manufacture and market those products for which the manufacturer demonstrates that there are no viable alternatives.

- 59. Comment:** The commentator questioned how other states in the OTR regulate AIM coatings and if Pennsylvania's requirements are more restrictive than those in other states. (8)

Response: Delaware has adopted a final AIM regulation. The Delaware regulation has been approved by EPA as a SIP revision. NPCA and several coating manufacturers appealed the regulation to the Delaware Environmental Appeals Board. By a unanimous vote, the Delaware Environmental Appeals Board upheld the Delaware AIM regulation.

As is the case with Pennsylvania, New York, Maryland, and New Jersey are in the process of adopting AIM regulations with VOC content limits consistent with those in the final-form Pennsylvania regulation and the final SIP-approved Delaware regulation.

States outside of the OTR, other than California, have not developed additional AIM regulations.

- 60. Comment:** The commentator questioned how the restriction of VOC content in coatings will affect businesses that utilize the products. (8)

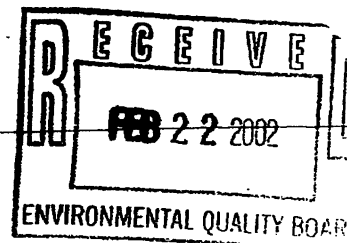
Response: The Department does not anticipate any significant adverse impacts on users of the complying formulations. The low-VOC content limits may require that certain users change their work practices to use the reformulated coatings properly. However, these changes should not be significant. It is anticipated that the use of reformulated coatings may improve productivity because the shorter drying time for many water-based formulations will allow quicker re-coating and less time at a job site or fewer return trips to the site for professional painters. Because of the lower VOC content of the coatings, workers and occupants of structures being painted will experience reduced exposure to hazardous pollutants and VOCs.

- 61. Comment:** The commentator requests that in addition to the commentator's testimony, summary of concerns and "Recommended Changes to Proposed Rulemaking of the Environmental Quality Board [25 PA. CODE CH 130] Architectural and Industrial Maintenance Coatings [31 Pa.B. 6807]," the Department "consider the August 30, 2001 submission to Delaware concerning Delaware's proposed adoption of the OTC AIM Coatings Model Rule." (2)

Response: The Department has reviewed and considered the commentator's submission to Delaware, which the Department understands to have been submitted to the Board as background material and not as official comments on the Pennsylvania rulemaking. The commentator makes most, if not all, of the same comments on the Pennsylvania rulemaking. Although the Department has reviewed and considered the comments on the Delaware rulemaking, the Department is not providing specific responses to them. The Department has provided specific responses throughout this Comment and Response document to the comments of the commentator that are submitted specifically on the Pennsylvania rulemaking.



Summary of Comments



The Sherwin-Williams Company
Environmental, Health & Regulatory Services
101 Prospect Avenue, N.W.
Cleveland, Ohio 44115-1075
Facsimile: (216) 566-2730

- Sherwin-Williams has significant concerns with the proposed standards for interior wood clear and semi-transparent stains, interior wood varnishes, interior wood sanding sealers, exterior wood primers, and floor coatings.
- The proposed standards are based on the inaccurate assumption that compliant coatings are available or that substitute complying products can be developed which will meet the performance requirements of the customers.
- In fact, the "compliant coatings" for these sub-categories do not meet the performance requirements of our customers and/or will result in increased and earlier repainting. They are effectively not within the limits of current technology.
- The DEP has not considered the increased emissions resulting from such performance issues and repainting results, and has not considered these facts in the proposed regulation.
- Sherwin-Williams proposes changes to the VOC standards for only a few of the 46 product categories proposed by Pennsylvania. In conjunction with the Pennsylvania proposed standards, the Sherwin-Williams proposal will achieve significant reductions beyond the National AIM rule (26.5 tons per day). This is very close to amount of emissions reduction determined for the Pennsylvania proposed rule.
- The proposed rule is unreasonably stringent and unnecessary for the protection of the public health, welfare and safety.
- The record does not support the emission reduction claims of the proposed rule, and the proposed rule is arbitrary and capricious.
- The proposed rule will have a significant adverse economic impact on Sherwin-Williams. In using its discretionary authority to set VOC standards, DEP must consider the economic impact the proposed rule will have on its actions, and has not adequately evaluated the adverse impact on Sherwin-Williams business in Pennsylvania. DEP can issue a rule which still achieves substantial VOC emissions reductions beyond the National AIM rule, without causing a serious adverse impact on potential sales of certain products.
- The economic analysis used in this rule development is inaccurate. It uses a figure of \$6400 per ton of VOC emissions reduced. This figure was copied from California. However, the situation in Pennsylvania is significantly different from that in California. All architectural coating products in California have been under VOC restrictions since the late 1980's. Thus, in estimating the cost impact of a new limit versus a current limit, California only considered the difference between the current status and the proposed status. In Pennsylvania the current status does not include any of the VOC restrictions that are appropriately assumed for California. Pennsylvania will need to make an independent determination of the cost of the VOC reductions contained in the proposed regulation.
- Sherwin-Williams respectfully requests that the DEP adopt Sherwin-Williams comments for alternative VOC limitations for the categories referenced above.
- Both the Consumer Products regulation and the architectural coatings regulation proposed by Pennsylvania are based on rule developments in California. However, while Pennsylvania's proposal includes the California averaging provision for consumer products, it does not do so for architectural coatings. This unbalanced approach to regulatory decisions is arbitrary and capricious and places an unreasonable and unequal burden on the architectural coating industry.
- Thank you for the opportunity to provide these comments.

Madelyn K. Harding

Madelyn K. Harding, Manager
Product Compliance & Registrations

February 22, 2002

SUMMARY OF CONCERNS ABOUT PROPOSED AIM COATINGS REGULATION BY PENNSYLVANIA

- A) The National Paint and Coatings Association vigorously opposes the adoption of the proposed rule as written. The limits are based on ones established in California which are currently under litigation fought by the NPCA. Among NPCA's concerns is the solvent restrictions for many of the coatings involved will result in poorer performing and less durable coatings. In some cases the limits are so low as to compromise lower solvent waterborne coatings which have been developed to replace higher solvent coatings.
- B) The record does not reflect substantial evidence sufficient to justify the limits proposed for certain coatings categories and thus the adoption of such limits would be arbitrary capricious. For these coatings categories we suggest alternative limits in the NPCA Alternative Proposal, as well as changes in definitions. These changes would correct these deficiencies in the proposed rule and still provide approximately 70% of the VOC emission reductions purportedly secured by the proposed rule
- C) Furthermore, we believe that due to technology changes and customer preference, the actual VOC reductions garnered from the implementation of the NPCA Alternative Proposal could well exceed the reductions projected for it. The NPCA would like to work with the Pennsylvania and other OTC states on conducting a VOC Content Survey of the AIM products sold in the entire OTC region. This survey would provide assurance to Pennsylvania that VOC reductions under our proposal would be achieved and would allow Pennsylvania to take full credit for the all VOC reductions that have actually taken place beyond those based on estimates similar to the figures ascertained.
- D) The multitude of performance problems aligned with the implementation of the proposed limits have been outlined in our oral comments to the Board and detailed in the extensive written comments that NPCA and individual coatings companies have submitted to the Pennsylvania DEP. We endorse the comments made by our members, including Benjamin Moore and Sherwin Williams. The DEP has erred in not considering the increased emissions costs that will result from the performance problems.
- E) The cost estimate of the rule of \$65 million/year is greatly understated because the cost model assumes that all the coatings at the proposed limits will be as good as the coatings at the existing limits and thus will not have the associated performance deficiencies identified by the industry. It also does not take into account the impact of these difficulties on smaller companies, which have fewer chemists to meet the reduced limits and resources to absorb the costs of such deficiencies. Moreover, they are based on estimates of similar limits in California a regulatory environment which had already greatly reduced the limits allowed and thus fail to take account of the full costs imposed by moving from the higher national AIM rule limits.
- F) NPCA formally requests a meeting with the Independent Regulatory Review Commission to further explain its concerns and to assist the Commission in carrying out its legislative mandate to ensure that cost effective rules are adopted that achieve real as opposed to only hoped for environmental benefits and that minimize economic burdens. The proposed rule does not pass muster under these reasonable criteria and is thus unreasonably burdensome for the protection of the public health, welfare, and safety.

**FACE SHEET
FOR FILING DOCUMENTS
WITH THE LEGISLATIVE REFERENCE
BUREAU**

(Pursuant to Commonwealth Documents Law)

#2238

RECEIVED

2003 AUG -6 PM 2:55

INDEPENDENT AGENCIES
REVIEW COMMISSION

DO NOT WRITE IN THIS SPACE

Copy below is hereby approved as to form and legality.
Attorney General

By: _____
(Deputy Attorney General)

DATE OF APPROVAL _____

Check if applicable
Copy not approved. Objections attached.

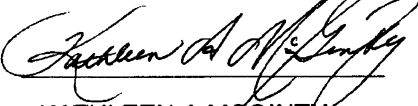
Copy below is hereby certified to be true and
correct copy of a document issued, prescribed or
promulgated by:

DEPARTMENT OF ENVIRONMENTAL
PROTECTION
ENVIRONMENTAL QUALITY BOARD

(AGENCY)

DOCUMENT/FISCAL NOTE NO. 7-371

DATE OF ADOPTION 7/15/03

BY 

TITLE **KATHLEEN A MCGINTY
CHAIRPERSON**

EXECUTIVE OFFICER CHAIRMAN OR SECRETARY

Copy below is hereby approved as to form and legality
Executive or Independent Agencies

BY


DATE OF APPROVAL 7/24/03

(Deputy General Counsel)
(~~Chief Counsel - Independent Agency~~)
(Strike inapplicable title)

Check if applicable. No Attorney General Approval
or objection within 30 days after submission.

ORDER ADOPTING REGULATIONS

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENVIRONMENTAL QUALITY BOARD**

Architectural and Industrial Maintenance (AIM) Coatings

25 Pa. Code, Chapter 130, Subchapter C

**Notice of Final Rulemaking
Department of Environmental Protection
Environmental Quality Board
(25 Pa. Code, Chapter 130)
(Architectural and Industrial Maintenance Coatings)**

Order

The Environmental Quality Board (Board) by this order establishes Chapter 130, Subchapter C (relating to architectural and industrial maintenance coatings) to read as set forth in Annex A.

The amendments add definitions in § 130.302 for terms that are used in the substantive sections of Chapter 130 (relating to standards for products). Section 130.301 (relating to applicability) will apply to any person who supplies, sells, offers for sale, manufactures, blends, repackages, applies or solicits for application architectural and industrial maintenance coatings for use in this Commonwealth. Sections 130.303--130.311 establish, among other things, standards for volatile organic compound (VOC) content limits for those coatings, labeling requirements, reporting requirements, procedures for applying for and obtaining variances, including procedures for a public hearing, and test method compliance requirements.

This order was adopted by the Board at its meeting of July 15, 2003.

A. Effective Date

These amendments will go into effect upon publication in the *Pennsylvania Bulletin* as a final rulemaking.

B. Contact Persons

For further information contact Terry Black, Chief, Regulation and Policy Development Section, Division of Air Resource Management, Bureau of Air Quality, Rachel Carson State Office Building, P.O. Box 8468, Harrisburg, PA 17105-8468, (717) 787-2030; or Kristen Campfield, Assistant Counsel, Bureau of Regulatory Counsel, Office of Chief Counsel, P.O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. Persons with a disability may use the AT&T Relay Service by calling 1-800-654-5984 (TDD users) or 1-800-654-5988 (voice users). This final-form rulemaking is available electronically through the DEP Web site (<http://www.dep.state.pa.us>).

C. Statutory Authority

The final-form rulemaking is being made under the authority of Section 5 of the Air Pollution Control Act (35 P.S. § 4005), which grants the Board the authority to adopt regulations for the prevention, control, reduction and abatement of air pollution.

D. Background

When ground-level ozone is present in concentrations in excess of the Federal health-based standard, public health is adversely affected. The Environmental Protection Agency (EPA) has concluded that there is an association between ambient ozone concentrations and increased hospital admissions for respiratory ailments, such as asthma. Further, although 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 ambient ozone while engaged in activity that involves physical exertion. Though the symptoms are often temporary, repeated exposure could result in permanent lung damage. The implementation of additional measures to address ozone air quality nonattainment in this Commonwealth is necessary to protect the public health.

The purpose of this final-form rulemaking is to reduce the VOCs emitted from architectural and industrial maintenance (AIM) coatings. This final-form rulemaking is part of the Commonwealth's strategy to achieve and maintain the ozone standard throughout this Commonwealth. A Federal AIM coatings rule was promulgated in 1998. The Federal rule, however, did not provide the expected cost-effective and creditable VOC emission reductions originally anticipated by this Commonwealth and many other states. To capture additional emission reductions, the Commonwealth is adopting this final rulemaking, which is based on the Ozone Transport Commission (OTC) model rule, to reduce the allowable VOC content of AIM coatings. The Commonwealth has used the California Air Resources Board (CARB) Suggested Control Measure (SCM) and the OTC model rule and background material as a starting point and reviewed those documents, including specific emission reductions, for applicability in this Commonwealth. As a result, the Commonwealth's final-form rulemaking includes product categories covered in California, with limits effective at a date later than in California. To maximize consistency, VOC content limits for specific product categories in many cases are identical to those used in California.

This final-form rulemaking sets specific VOC content limits, in grams per liter, for 48 AIM coating categories and requires more stringent VOC content limits than the Federal rule. The limits are currently in effect in California and are known to be technologically feasible. The compliance date for the Commonwealth's limits is January 1, 2005. Manufacturers will ensure compliance with the limits by reformulating coatings and substituting coatings with compliant coatings that are already on the market.

Manufacturers producing AIM coatings will be responsible for developing and distributing compliant coatings for sale at the retail and wholesale levels. In addition, any person who sells, supplies, offers for sale, blends or repackages AIM coatings will also be held accountable. Consumers should not be affected by this final-form rulemaking in that they should not notice any changes in the performance or quality of the AIM coatings. Consumers may, however, experience a cost increase for certain paint products. Cost data developed by E.H. Pechan & Associates indicate the cost per ton of VOC reductions under the final-form AIM regulation to be approximately \$6,400 per ton of reductions. An analysis conducted by Aberdeen Proving Grounds, however, indicates that low VOC coatings are available that will result in average savings of approximately \$1.76 per gallon compared with higher VOC coatings.

The final-form rulemaking contains VOC content requirements for a wide variety of field-applied coatings, including graphic arts coatings, lacquers, primers and stains, to name a few. It also contains provisions for a variance from the VOC content limits, which can be issued only after public hearing and with conditions for achieving timely compliance. The final-form rulemaking contains administrative requirements for labeling and reporting. There is a reporting requirement, such that manufacturers may be required to submit information to the Commonwealth upon request. There are a number of test methods that must be used to demonstrate compliance with this final-form rulemaking. Some of these test methods include those promulgated by the EPA and South Coast Air Quality Management District of California. Enforcement of the VOC content limits and other requirements will be done by the Commonwealth. Because the Commonwealth in conjunction with other Northeastern States met over an 18-month period with representatives of National trade associations and related industries prior to proposing this regulation, it is important that these regulations be implemented consistently and uniformly.

The Department worked with the Air Quality Technical Advisory Committee (AQTAC) in the development of this final-form rulemaking. At its February 20, 2003, meeting the AQTAC recommended adoption of this final-form rulemaking, with the deletion of proposed Section 130.303(d) (see below, under Part F). The Committee recommended the deletion of Section 130.303(d) because the Committee determined that the pollution prevention provisions contained in that section could result in potential enforcement inequities and inconsistencies.

The final-form rulemaking was also reviewed by the Small Business Compliance Advisory Committee on April 23, 2003. The Committee supported the final-form rulemaking and endorsed the Department's determination that the final-form rulemaking should not include averaging provisions.

E. Summary of Regulatory Requirements and Major Changes Between Proposed and Final-Form Rulemakings

Section 130.301 (relating to applicability) states that this subchapter is applicable to persons who supply, sell, offer for sale, manufacture, blend, repackage, apply or solicit for application an architectural or industrial maintenance coating for use within this Commonwealth.

Section 130.302 (relating to definitions) includes the following definitions of terms that will be used in the substantive provisions of Subchapter C. The definitions include: "adhesive," "aerosol coating product," "antenna coating," "antifouling coating," "appurtenance," "architectural coating," "bitumens," "bituminous roof coating," "bituminous roof primer," "bond breaker," "calcimine recoater," "clear brushing lacquers," "clear wood coatings," "coating," "colorant," "concrete curing compound," "concrete surface retarder," "conversion varnish," "dry fog coating," "exempt compound," "faux finishing coating," "fire-resistive coating," "fire-retardant coating," "flat coating," "floor coating," "flow coating," "form-release compound," "graphic arts coating or sign paint," "high-temperature coating," "impacted immersion coating," "industrial maintenance coating," "lacquer," "low-solids coating," "magnesite cement coating," "mastic texture coating," "metallic pigmented coating," "multi-color coating," "nonflat coating," "nonflat high gloss coating," "non-industrial use," "nuclear coating," "post-consumer coating,"

“pretreatment wash primer,” “primer,” “quick-dry enamel,” “quick-dry primer, sealer and undercoater,” “recycled coating,” “residence,” “roof coating,” “rust-preventive coating,” “sanding sealer,” “sealer,” “secondary coating (rework),” “shellac,” “shop application,” “solicit,” “specialty primer, sealer and undercoater,” “stain,” “swimming pool coating,” “swimming pool repair and maintenance coating,” “temperature-indicator safety coating,” “thermoplastic rubber coating and mastic,” “tint base,” “traffic marking coating,” “undercoater,” “varnish,” “VOC,” “VOC content,” “waterproofing sealer,” “waterproofing concrete/masonry sealer” and “wood preservative.”

Section 130.303 (relating to standards) sets forth the quantity of VOC per liter that cannot be exceeded for coatings that are sold, supplied, or offered for sale in this Commonwealth; manufactured, blended or repackaged for sale in this Commonwealth; or applied or solicited for application in this Commonwealth. VOC content limits are established for nonspecialty coating categories and specialty coatings. The number of coating categories regulated under this rule is 48.

Section 130.304 (relating to container labeling) requires that each manufacturer of coatings subject to this rule supply specific information on the coating container in which the coating is sold or distributed. Some of the information that must be displayed includes a date-code, VOC content and thinning recommendations.

Section 130.305 (relating to reporting) requires that manufacturers submit reports to the Department, upon request by the Department, that specify the number of gallons sold in the Commonwealth and the methods used by the manufacturer to calculate sales in the Commonwealth.

Sections 130.306 through 130.310 (relating to application for variance; variance orders; termination of variance; extension, modification or revocation of variance; and public hearings) were added at final-form rulemaking. They set forth the procedures that a person may use to apply for a variance of a limited duration with conditions for achieving compliance for AIM coating VOC content limits. The provisions include a requirement for a public hearing prior to issuance, extension, modification, or revocation of a variance order. When a complete variance application is received, the Department will hold the public hearing within 90 days.

Section 130.311 (relating to compliance provisions and test methods) sets forth the methods for calculating the VOC content of the coatings and the test methods, which are incorporated by reference, that are subject to the provisions of this final-form rulemaking. The test method that is current at the time the test is performed is the method that must be used.

The major changes that were made from proposed to final-form rulemaking include: adding additional definitions in Section 130.302 (relating to definitions) to ensure that each regulated category of coatings is clearly defined; deleting at AQTAC's request proposed Section 130.303(d) (relating to painting practices), which would have required users to keep containers closed when not in use; adding VOC-per-liter content limits in Section 130.303 (relating to standards) for calcimine recoaters, conversion varnish, concrete surface retarders, impacted immersion coatings, lacquers (including lacquer sanding sealers), nuclear coatings and

thermoplastic rubber coatings and mastic as a result of public comments received; adding Sections 130.306 through 130.310 to establish procedures for applying for a variance from VOC content limits, including a public hearing requirement, in order to allow time to comply with the limits in cases of technological infeasibility; clarifying in Section 130.311 (proposed as Section 130.306) that test methods used to test coatings subject to the regulation must be the most current test method at the time testing is performed; and adding two new test methods in Section 130.311 (relating to compliance provisions and test methods) applicable to new categories added in the final-form regulation.

The final-form rulemaking will be submitted to the EPA as an amendment to the State Implementation Plan.

F. Summary of Comments and Responses on the Proposed Rulemaking

Several commentators indicated that many of the proposed volatile organic compound (VOC) limits are not technologically feasible for the wide-ranging substrates, application environments, and conditions for which a particular category of coating will be used and that the final regulation should contain revised VOC content limits for “exterior flat coatings,” “non-flat coatings,” “nonflat high gloss coatings,” “floor coatings,” “lacquers,” “quick-dry coatings,” “sanding sealers,” “stains,” and “varnishes.” The Board disagrees. Although each manufacturer may not make all coatings in each category, compliant coatings are available in each category. The Board has not revised the VOC content limits in the final-form rulemaking. However, provisions have been added to the final-form rulemaking in Sections 130.306 – 130.310 (relating to application for variance, variance orders, termination of variance, extension, modification or revocation of variance, and public hearings) that provide a mechanism for a person to obtain a variance from the VOC content limits if the person can demonstrate that compliance cannot be achieved because of technological infeasibility.

One commentator stated that the proposed VOC limits for flat coatings would eliminate currently available low VOC waterborne flat coatings that can be applied in cooler months when ozone is not a problem. The Board disagrees. Exterior flat coatings are currently available and are being marketed that meet the proposed limits and that are designed for application at temperatures as low as 35°F. Exterior coatings are designed for application on a variety of substrates including finished and unfinished siding, stucco, masonry, hardboard siding and similar surfaces. Interior flat coatings are available for application at temperatures above 50°F, and may be applied to new or previously painted interior wallboard, plaster, ceilings and masonry, as well as primed or previously painted wood and metal.

Two commentators on behalf of the same organization indicated that the proposed VOC content limits would require that the coatings be transported and stored in heated environments to prevent freezing and destruction of the product. The Board disagrees. Numerous low-VOC products have been introduced into the Northeast market, including ultra-low VOC products, and there is no data to support the claim that these products experience increased damage because of freezing during storage and shipping.

Two commentators said that the testing and studies that were relied upon by CARB in setting the SCM on which the limits in the regulation are based, were not adequately performed or were laboratory tests that cannot be relied on for determining coating efficacy. The Board disagrees. The coating testing, coupled with actual field experience and consumer use and acceptance, indicates adequate performance of the coatings.

Two commentators on behalf of the same organization stated that the proposed requirement would confine virtually all exterior and unheated interior painting to the warmer months, reducing the livelihoods of painters and increasing the application of coating during the ozone season. The Board disagrees. Low-VOC coatings are currently available that are formulated to provide for interior and exterior application at temperatures as low as 35°F. These coatings allow extension of the coating application period well beyond the ozone season.

Several commentators stated that the proposed VOC content limitations would result in the elimination of cost effective, durable and scrub resistant interior and exterior wall and trim coatings used for high traffic/usage/impact or extreme exposure environments. The Board agrees that certain coatings presently marketed for such uses may not comply with the proposed requirements. However, low VOC replacement products are presently being marketed that provide similar performance characteristics to the higher VOC coating materials. In the event that a manufacturer cannot produce complying products because of technological infeasibility, the manufacturer may apply in writing to the Department for a variance under the provisions of Section 130.306 (relating to application for variance) that has been added to the final-form rulemaking.

Two commentators suggested that the definitions of “bituminous roof coating” and “bituminous roof primer” be revised by deleting the reference to “roofing” from the terms and definitions. The commentators indicated that the definitions in the proposed regulation, requiring labeling and formulation exclusively for roofing, would cause substantial confusion among manufacturers because some of the products are formulated for multiple purposes. The Board disagrees. The definitions of the terms in the proposed regulation clarified that the terms and VOC content limits apply to materials formulated and labeled exclusively for roofing application. “Bituminous roof primer” materials formulated and labeled for multiple types of uses would be limited by the “non-flat” category VOC content limit of 150 grams per liter. The Board has not revised the definitions of the terms “bituminous roof coating” and “bituminous roof primer” in the final-form regulation.

Two commentators commented that the proposed VOC content limit of 350 grams per liter for “bituminous roofing primer” materials may result in increased VOC emissions because at lower temperatures, more low VOC content material may be required to cover the same area than would be required of higher VOC content materials. The Board agrees that the viscosity of the “bituminous roofing primer” materials may increase at lower temperatures and that under some circumstances material use may increase slightly. However, if this slight increase in material use does occur, it will be outside of the ozone season (May to September) and should not negatively impact the Commonwealth’s ozone reduction efforts.

Several commentators suggested that the final regulation should contain revised VOC content limits for “interior wood clear and semi-transparent stains,” “interior wood varnishes,” “interior

wood sanding sealers,” “exterior wood primers,” and “floor coatings.” The Board disagrees. Coatings are available and are being marketed that meet the VOC content limits in the regulation, indicating the technological feasibility of the limits and consumer acceptance of the products. In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of new Section 130.306 (relating to application for variance) that is added to the final-form rulemaking. The Board has not revised the VOC content limits in the final-form rulemaking.

Several commentators stated that the proposed limits for “interior wood stains,” “varnishes,” and “sanding sealers” are based on the assumption that complying coatings are available that meet the performance requirements for the subcategories and that the use of coatings formulated to comply with the proposed VOC content limits will result in unacceptable performance issues, including “grain raising,” “lapping,” and “panelization.” These commentators suggested that the limits in the regulation should be revised. The Board does not agree that the proposed limits will produce unacceptable performance characteristics. Grain raising can be addressed with a light sanding between coating applications. Lapping of finish materials can be addressed by proper application techniques. Complying products are being produced and marketed, indicating that the products meet customer acceptance and performance expectations and that the issues of grain raising and lapping are not significant to consumers. The most common cause of panelization is reportedly the failure of the owner to maintain the floor or the indoor environment properly. There is no indication that water-based products are not appropriate, only that the finisher should be aware and use proper procedures. In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of a new Section 130.306 (relating to application for variance) that is added to the final-form rulemaking. The Board has not revised the VOC content limits for the products in the final-form rulemaking.

One commentator stated that the proposed VOC content limit for “primers, sealers and undercoaters” assumes that complying products are available or that suitable substitutes can be developed for the categories. Numerous manufacturers produce complying formulations in this coating category and there is no indication in the product literature that these coatings are inadequate. Many of the coatings are marketed with claims of exceptional performance. In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of new Section 130.306 (relating to application for variance) that is added to the final-form rulemaking. The Board has not changed the limits in the final-form rulemaking.

One commentator recommended that the Department revise the VOC content limit for the “floor coating” category from 250 to 400 grams of VOC per liter. The commentator indicated that reliance on testing done in California was not appropriate because testing in California has been done only on concrete and not on wood floors such as there are in the Northeast. According to the commentator, coatings for wood floors need the penetrating qualities of solvent-borne floor paints. The Board does not agree that the VOC content limit should be changed for floor coatings. Floor coatings are presently available and are being marketed that meet the limits in the regulation. In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of

new Section 130.306 (relating to application for variance) that is added to the final-form rulemaking. The Board has not changed the VOC content limit for floor coatings in the final-form regulation.

One commentator suggested that the VOC content limit for “bituminous roof primer” should be changed to 550 grams per liter to achieve necessary application properties. The Board disagrees. Information contained in the CARB “Staff Report for the Proposed Suggested Control Measure for Architectural Coatings” indicates that bituminous roofing primers meeting the limit of 350 grams *currently* account for in excess of 50 percent of the market share in California. This strongly indicates that materials that meet the limit of 350 grams per liter are readily available. The Board has not revised the VOC content limit for bituminous primers in the final-form regulation.

One commentator recommended the addition of a separate category for “exterior wood primers, sealers and undercoaters” with a VOC content limit of 350 grams per liter, or, as an alternative, a revision to the definition of “specialty primer” to include coatings “recommended for application to exterior wood surfaces.” The commentator indicated that this change would be necessary to allow the use of solvent-borne primers on hardboard products to prevent water penetration. The Board does not agree that this revision is necessary. A number of coating manufacturers produce complying products in the “primer, sealer and undercoater” category, including products for professional use. Certain of these complying products are for use on new or unpainted wood/wood-based products. The commentator has not provided any evidence to indicate that complying formulations that provide acceptable performance are not feasible. The Board has not made this revision in the final-form regulation.

One commentator indicated that many coatings will take longer to dry and cure in humid or colder weather leaving the coating more vulnerable to dirt pickup and complete failure. The Board disagrees that this is a concern. Typically, the time required for the drying of water-based coatings is significantly less than the drying time for solvent based materials. When the materials are applied according to manufacturers’ specifications, the finish quality and durability are satisfactory.

One commentator questioned why the Board proposed a VOC content limit of 340 grams per liter for industrial maintenance (IM) coatings instead of the limit of 250 grams per liter limit in the OTC model rule. The OTC model rule contained the option for the states to set the VOC content limit for IM coatings at 340 grams per liter. This limit is also an optional limit in certain areas of California, such as San Francisco, where cooler, damper weather conditions exist. The Board proposed the limit and retained it in the final-form rulemaking because of the need for IM coatings that can be applied in cooler and damper weather conditions as might be experienced in Pennsylvania.

Two commentators on behalf of the same organization commented that the proposed solvent content restrictions would result in poorer performing, less durable coatings, and in some cases would compromise effective lower solvent waterborne coatings that have been developed to replace higher solvent coatings. The Board disagrees. Although the coatings industry has provided some information concerning performance and durability of low VOC coatings, the

information is subjective and does not empirically demonstrate that the reformulated coatings do not perform adequately. Numerous coating manufacturers produce complying coatings that are described in the manufacturers' product literature and in trade publications as providing exceptional film durability, and having high hiding power, resistance to fading and other desirable characteristics.

Several commentators indicated that the proposed VOC content limits would result in the need for more frequent application of coatings or the application of several coats of finish material when a single application of a coating formulated at a higher VOC content might have been satisfactory. The commentators suggested that this could result in increased VOC emissions rather than reducing emissions. The Board disagrees that the proposed VOC content limits will result in increased VOC emissions resulting from the need for more frequent application of coatings due to inadequate coating performance. Information available for products currently available that meet the proposed VOC content limits indicates that the products have application and performance characteristics equivalent to high VOC content products. The commentators have not provided technical data supporting the contention that complying coatings will result in increased VOC emissions.

Two commentators on behalf of the same organization indicated that many coatings would be difficult to apply because of the dry time, composition, and increased vulnerability to slight environmental changes. The Board disagrees that the level of difficulty of coating application and other factors will be adversely affected by the proposed VOC content limitations. Product literature supports this. When the complying products are used according to manufacturers' specifications, the user/consumer should not notice differences.

The same commentators indicated that the rulemaking would result in the elimination of small volume specialty coatings that are designed to meet special needs, such as anti-graffiti coatings. The Board disagrees. Water-based, complying coatings are available in all of the categories for which standards are established in Table 1. Although some manufacturers may be required to reformulate products to meet the VOC content standards, the reformulations are feasible. For every category of coatings for which limits are established in Table 1, complying formulations are available. The VOC content limits in Table 1 have not been changed in the final-form rulemaking.

These commentators also indicated that the proposed rulemaking will result in the reduction of availability of colors for interior and exterior coatings and gloss levels. The Board disagrees. Coatings that meet the VOC content limits are available in all coating categories. The commentators have not provided data that indicates that a broad range of coating colors and sheens will not be available to meet the limits in Table 1. Information does indicate that complying products are available in interior and exterior finishes in a variety of gloss levels and a full range of colors.

One commentator indicated that the VOC content limits for interior wood sealers would result in inferior products and increased costs for consumers. The Board disagrees. A review of product data sheets indicates that there are latex sealers suitable for use on interior wood substrates, all of which would comply with the proposed VOC limit for primers, sealers, and undercoaters.

Compliance is technologically feasible through the use of water-based technology. The Board has not changed the VOC content limits for interior wood sealers in the final form-rule making.

One commentator indicated that the VOC content limit for semi-transparent stains should be maintained at the current federal limit of 550 grams per liter in order to assure that the level of performance of the materials is maintained. The Board disagrees. The commentator has provided no data showing that reducing the VOC content limit for semi-transparent stains is not technologically feasible. The commentator has not provided data to the Department demonstrating that maintaining the VOC content limit for semi-transparent stains is necessary to assure adequate performance for these materials. In the event that formulation of a specific product is determined to be technologically infeasible, the manufacturer may request a variance for the product under the provisions of new Section 130.306 (relating to application for variance).

One commentator questioned how low-VOC content requirements might impact the quality of the products. Specifically, the commentator questions whether reformulation of products to meet the low-VOC content might result in lower quality products that would require more frequent refinishing and, consequently, increased emissions. Based on product technical literature available for low-VOC content products, the Department does not expect an increase in repainting as a result of the requirements. Manufacturer claims regarding the performance of the low-VOC content materials generally indicate that the reformulated products perform as well as, or better than, high-VOC content products.

A commentator supported the proposed rulemaking because it will result in reduction of VOC emissions and ground level ozone. In addition, the commentator indicated that the regulation will reduce exposure by citizens to hazardous air pollutants. The Board agrees that the emission reductions that will result from the VOC content limits will result in reduced exposure of the citizens of the Commonwealth to hazardous air pollutants and unhealthy ground-level ozone.

Several commentators suggested that the Department adopt a revised Table of Standards for coatings and other regulatory provisions that the commentator believes would achieve approximately 70 percent of the reductions predicted by the Department to result from the proposed regulation. The Board agrees that the revised Table of Standards and other suggested revisions may result in emission reductions of approximately 70 percent of the VOC reductions predicted for the final-form rulemaking. However, this lower level of emission reductions would be inadequate to satisfy the emission reduction requirements necessary for the Commonwealth to achieve and maintain the health-based ozone air quality standards. Furthermore, compliant coatings are available and are currently being marketed which meet the proposed limitations. The Board has not revised the Table of Standards in the final-form rulemaking to incorporate the suggested limits.

Several commentators indicated that the Department has not considered the increased emissions that will result from increased painting required because of the reduced performance of complying coatings. The Board does not agree that there will be increased emissions resulting from the use of complying coatings. Surveys in California, where restrictive coating VOC requirements have been in place for several years, indicate no increase in per capita coating use

resulting from the implementation of the low VOC requirements. Furthermore, product literature for complying coatings indicates that the materials exhibit exceptional durability and performance characteristics.

One commentator suggested that the regulation is unreasonably stringent and unnecessary for the protection of the public health, welfare and safety. The Board does not agree that the regulation is unreasonably stringent or unnecessary. The emission reductions that will result from the regulation are necessary to satisfy State Implementation Plan (SIP) commitments for achievement and maintenance of the health based ozone National Ambient Air Quality Standard (NAAQS) in the Southeast Pennsylvania ozone nonattainment area and for the achievement and maintenance of the 8-hour ozone NAAQS throughout Pennsylvania.

One commentator indicated that the record does not support the emission reduction claims of the proposed rule and the proposed rule is arbitrary and capricious. The Board disagrees. The emission reduction estimates for the regulation are based on an analysis conducted for the Ozone Transport Commission (OTC) by E. H. Pechan and reported in "Control Measure Development Support Analysis of Ozone Transport Commission Model Rules," (March 31, 2001). This analysis is based on the best available information regarding AIM coating use and formulation data available to the OTC member states regarding AIM coatings. The VOC content limits in the regulation are based on CARB's extensive analysis of AIM coatings and reflect coating technologies that are available.

A commentator expressed concern that certain exceptions in the regulation could negatively impact the VOC emission reductions anticipated from the AIM program. The commentator indicated that the effectiveness of the regulation would be enhanced if the exceptions in Section 130.303(b) (relating to most restrictive VOC limit) were to be eliminated. The Board disagrees. The exceptions to the most restrictive VOC content limits provided for in Section 130.303 (relating to standards) are necessary to allow the use of specialized coatings where high performance characteristics are important. These exceptions are retained in the final-form rulemaking.

Two commentators on behalf of the same organization suggested that the definition of "nonflat high gloss coating" should be revised. The Board disagrees. There is no functional distinction between the definition of "nonflat high gloss coating" in the proposed rulemaking and the language submitted by the commentator. The Board has not revised the definition in the final-form rulemaking.

Several commentators suggested that the definition of "specialty primer" should be revised to include wording that would include additional coatings in this category, including coatings used to "...block odors or efflorescence..." and coatings that are "... recommended for application to exterior wood or wood-based surfaces, or for highly alkaline cement, plaster, and other cementitious surfaces." The suggested change would increase the number of coatings included under the term, including all coatings recommended for exterior wood applications. This would result in an increase in the allowable VOC content for exterior wood coatings from 100 g/l for flat coatings to 350 g/l; for nonflat coatings, from 150 g/l to 350 g/l; and for nonflat high gloss coatings, from 250 g/l to 350 g/l. The Board does not agree that all of the suggested changes to the definition are necessary. Complying coatings are available that perform the functions

recommended by the commentator without changing the definition. Changing the definition as suggested by the commentators would allow a significant number of coatings available in low VOC formulations to be regulated at higher VOC content limits. This would result in fewer emission reductions from the regulation than predicted and would jeopardize achievement of the Commonwealth's necessary emission reductions. The Board has revised the definition in the final-form rulemaking by adding the phrase "...or efflorescence...." following "... to block stains ..." in the first sentence.

Two commentators on behalf of the same organization suggested that the rulemaking be revised to include three additional specialty coatings categories: conversion varnish, thermoplastic rubber coatings and impacted immersion coatings. The Board agrees and has added the definitions for these materials in Section 130.302 and VOC content limits for these three specialty coatings categories in Section 130.303 of the final-form rulemaking.

A number of commentators suggested the addition of definitions and product categories with VOC content limits for "calcimine recoaters," "conversion varnish," "concrete surface retarders," "impacted immersion coatings," "nuclear coatings," and "thermoplastic rubber coatings." The Board agrees and has added the terms and definitions for these materials in Section 130.302 and VOC content limits in Section 130.303 as suggested by the commentators to the final-form rulemaking.

One commentator suggested that the regulation should contain a coating definition and VOC content limit specifically for "nuclear coatings." The commentator indicated that if coating reformulation is required to meet a VOC content limit lower than the federal AIM limit, the cost of re-certifying the coatings to meet Nuclear Regulatory Commission requirements would be prohibitive. The Board agrees that there should be a separate coating definition and limit for "nuclear coatings" consistent with the federal requirements and has made these changes to the final-form regulation. The Board has added a definition of "nuclear coatings" to Section 130.302 and has added a VOC content limit for these materials in Section 130.303 of the final-form rulemaking.

One commentator indicated that the Department should develop a separate category of products to address concerns related to professional applications. This category should contain products labeled as "professional semi-transparent wood stain," "professional varnish," and "professional sanding sealer." The commentator suggested that the materials should be labeled, "For Professional Use Only," and that these "professional" coatings should be formulated at VOC content levels higher than those in the proposed regulation for the "non-professional" materials. The Board disagrees that the regulation should contain special categories for "professional" AIM coating materials. There is no practical way to assure that these products would be sold only to "professionals" and no practical way to enforce sales only to "professionals." Therefore, there is no assurance that any of the coatings in the product categories would be produced at "non-professional" coating VOC content compliance levels in Table 1 and there is no assurance that the Commonwealth would meet the required emission reductions. The Board has not added the coating categories and VOC content limits suggested by the commentator to the final regulation.

One commentator recommended that the Department revise the definition of “low solids coating” to include low-solids content semi-transparent stains that do not meet the proposed definition. Another commentator recommended that the definition be revised to include water-borne clear or semi-transparent stain. The Board disagrees that the definition should be revised as suggested by the commentators. The changes suggested would lessen the stringency of the VOC content limitation requirements for semi-transparent stains. This would reduce the emission reduction benefits of the final-form regulation and would jeopardize Pennsylvania’s ability to meet emission reduction requirements necessary to achieve and maintain the ozone air quality standard. Semi-transparent stain formulations that meet the limits in the final-form regulation are available in the market. The Board has not changed the definition in the final-form rulemaking. In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of new Section 130.306 (relating to application for variance) that has been added to the final-form rulemaking.

One commentator suggested that the Department should add a definition of “shellac” to the regulation. The Board agrees. A definition of “shellac,” a regulated category of coatings, has been added to Section 130.302 of the final-form regulation.

Several commentators suggested that the Department include provisions in the final rulemaking relating to variances consistent with the provisions in the Commonwealth’s recently promulgated consumer products regulation. The commentators believe that these provisions are necessary to provide equity and fairness by granting the same regulatory flexibility provided for consumer products. The Board agrees that there may be situations where a person may not be able to comply with the coating VOC content requirements because of technological infeasibility. The Board has added variance provisions in new Sections 130.306 - 130.310 (relating to application for variance, variance orders, termination of variance, extension, modification or revocation of variance, and public hearings) in the final rulemaking to allow producers to apply for limited variances from VOC content requirements.

Several commentators suggested that the Department revise the regulation to include averaging provisions to allow coating manufacturers to utilize credits for coatings formulated below compliance levels to allow the marketing of coating that do not comply with the regulatory limits. The Board disagrees that averaging provisions are necessary for manufacturers to achieve compliance with the VOC content requirements in the regulation. Complying coatings are available in each category for which VOC content limits are specified. An averaging provision is not necessary for manufacturers to comply with the proposed limits. One of the commentators who supports averaging indicates in the comments that an averaging provision “...would have to ensure the availability of a sufficient amount of below compliance VOC product such that there would be no **net increase** [emphasis added] in VOC emissions from his products as a whole.” The purpose of this regulation is to assure VOC emission reductions, not to maintain the status quo as suggested by the commentator. In addition, adding averaging provisions to the regulation can be extremely disadvantageous for coating manufacturers that have a limited product line with few coatings to use to generate credits for averaging. Coating manufacturers with a broad product line, especially those producing large volumes of those flat coatings that are easily formulated below the compliance levels could generate a large quantity of credits to be used to

avoid having to reformulate smaller volume coatings. This could be extremely disadvantageous for a smaller coating supplier with fewer product lines to average because the manufacturer would have to incur reformulating expenses. This competitive disadvantage could result in economic hardship and business failure of the smaller companies. The final-form rulemaking does not contain averaging provisions.

One commentator indicated that inclusion of an averaging provision in the Consumer Products regulation and not in the AIM regulation is arbitrary and capricious and places an unreasonable and unequal burden on the architectural coating industry. The Board disagrees. Unlike the AIM regulation, the Consumer Products regulation is technology-forcing. For this reason, it is appropriate to incorporate averaging provisions as a compliance option for consumer product manufacturers. The VOC content limits in the AIM regulation are not “technology-forcing.” Complying products are currently in the market for the regulated product categories. There is no need for averaging to meet the VOC content limits for AIM coatings. In the event that a manufacturer cannot formulate complying materials because of technological infeasibility, the manufacturer may apply for a variance under the provisions of new Section 130.306 (relating to application for variance) that is added to the final-form rulemaking. The Board has not added averaging provisions to the final regulation.

One commentator questioned why the Department has not included in the regulation the averaging provisions and the variance provisions that are contained in the OTC model rule on which the regulation is based. The OTC model does contain provisions for averaging. However, the language of the model rule relating to averaging provisions indicates that the averaging provisions “...shall cease to be effective on January 1, 2005, after which averaging will no longer be allowed.” The averaging provisions in the model rule are intended to apply only if compliance with the low-VOC content limits in the model rule is required before January 1, 2005. Pennsylvania’s regulation does not require compliance with the low VOC content limits until January 1, 2005, so the averaging provisions are not necessary. The Board has not included averaging provisions in the final-form regulation.

One commentator supported the proposed rulemaking “as is” without an averaging provision. The Board agrees that an averaging provision is not appropriate. The VOC content limits for the regulated coating categories are not “technology-forcing.” Coatings are presently being marketed at VOC content levels equal to or lower than the limits in the proposed regulation. The final-form regulation does not contain an averaging provision.

Two commentators on behalf of the same organization suggested that the Department include provisions in the final-form rulemaking relating to innovative technology consistent with the provisions in the Commonwealth’s recently promulgated consumer products regulation. The commentators believe that these provisions are necessary to provide equity and fairness by granting the same regulatory flexibility that is provided for consumer products. The Board disagrees. The innovative technology provisions of Subchapter B of Chapter 130 (relating to consumer products) are necessary because the VOC content limitations for the products regulated in Subchapter B are technology-forcing requirements. The VOC content limitations in

the proposed AIM requirements are not technology-forcing requirements. Products that meet the proposed VOC content limits for AIM coatings are presently available. The final rulemaking does not contain innovative technology provisions.

Several commentators indicated that the regulation should be revised to include a Technology Assessment provision to determine the appropriateness of the VOC limits in the regulation. The Board disagrees. Available information indicates that there are complying formulations available in each of the regulated categories. Based on the current availability of complying formulations, there is no need for future assessments unless plans are developed to implement additional coating VOC limitations. If such plans are developed, a Technology Assessment will be appropriate.

One commentator questioned whether the Department thought it necessary to have the information required in the annual report to the Department and the criteria that the Department will use to determine when the information will be requested. The reporting requirements in Section 130.305 (relating to reporting requirements) are necessary to provide the basis for the Department to monitor coating formulation and to determine the emission impacts of the AIM regulatory program. The Department is required periodically to prepare emission inventory data for use in the development of SIPs and tracking of SIP emission reduction commitments. The frequency of the data requests and the content of the reports will be determined based on the need and/or intended use of the reported information. Reporting requirements are retained in the final-form regulation.

One commentator suggested that the annual reporting requirements specified in Section 130.305 would not provide an accurate database of bituminous roof primers used in Pennsylvania. The commentator stated that, for example, many who purchase these products in Pennsylvania are not direct end users, but distributors of private label accounts and that, therefore, manufacturers of these products would have no means of knowing how much of the products that they sell either inside or outside of the Commonwealth are used within Pennsylvania. The Board disagrees that manufacturers or producers will not be able to provide data regarding product sales in Pennsylvania. While there may be certain products for which it may be difficult to track sales, generally distribution and marketing systems can provide data with a level of quality for the Commonwealth to track product use and determine emissions. The provisions of Section 130.305 have not been revised in response to this comment.

One commentator suggested that the reliance, by the Ozone Transport Region (OTR), on information developed by CARB relating to coating performance is not appropriate given the dissimilar climatic conditions in California and the Northeast. The Board disagrees that the climatic conditions between the two areas are so dissimilar that use of CARB's data is inappropriate. Although there are areas in California where weather conditions are generally hot and dry, there are areas that experience temperature and precipitation conditions similar to those in the Northeast.

Two commentators suggested that the reliance, by the Ozone Transport Region (OTR), on information developed by the CARB relating to coating availability and cost is not appropriate.

The Board disagrees that it is inappropriate to use information developed by CARB relating to product availability and costs. Complying products developed for sale in the California market, which includes areas with weather conditions and product application and durability requirements similar to those in Pennsylvania, are suitable for use in Pennsylvania. The use of the cost data developed by CARB in assessing the economic impact of the SCM should not unrealistically represent the cost of compliance for Pennsylvania. In fact, the cost estimates for complying with the requirements in Pennsylvania may be lower than the costs estimated for meeting the limits proposed in the CARB SCM in California. Inasmuch as the limits in the CARB SCM will be implemented in the South Coast Air Quality Management District and numerous other jurisdictions in California in 2003, prior to the compliance deadline in Pennsylvania, much of the research and development work will have been completed and the costs absorbed, absent any requirements in Pennsylvania.

One commentator questioned how the cost data developed by the CARB relating to cost is applicable to Pennsylvania. The use of the cost data developed by CARB in assessing the economic impact of the SCM represents the upper bounds of the cost of compliance for Pennsylvania. In fact, the cost estimates for complying with the requirements in Pennsylvania may be lower than the costs estimated for meeting the limits proposed in the CARB SCM. Inasmuch as the limits in the CARB SCM will be implemented in the South Coast Air Quality Management District and approximately 18 other jurisdictions in California in 2003, much of the research and development work will have been completed and the costs absorbed prior to implementation of any requirements in Pennsylvania.

One commentator indicated that the economic analysis used in the development of the regulation is inaccurate. The commentator stated that it is not appropriate to use CARB's cost data to estimate costs for Pennsylvania's requirements because low coating VOC requirements have been in place in California for a number of years. The commentator suggested that Pennsylvania should conduct its own independent assessment of the compliance costs for the program. The Board disagrees. The cost data for the regulation are based on an analysis conducted for the Ozone Transport Commission (OTC) by E. H. Pechan and reported in "Control Measure Development Support Analysis of Ozone Transport Commission Model Rules." This analysis is based on the best available information regarding costs available to the OTC member states regarding AIM coatings.

One commentator indicated that the Department should not rely on the results of the National Technical Systems (NTS) Studies carried out in California to assess the performance of coatings. The commentator cites a number of differences between the NTS Study protocols and "the generally accepted procedure," including the method of coating application and the size of the test panels. The Board agrees that there may be differences between the NTS Study protocols and evaluation methods used in other circumstances. However, the commentator has not provided information refuting the validity of the NTS Study. In fact, the protocols used for the NTS Study were agreed upon, in advance, by a group representing among others, the coating industry.

A commentator indicated that the regulation should not include small manufacturer exemptions or delayed implementation dates for any manufacturers. The commentator indicated that the

final regulation should provide a level playing field for all manufacturers. The Board agrees that there should not be small manufacturer exemptions or specific delayed implementation dates. The final-form regulation does, however, include a variance provision if a manufacturer can show that compliance by the January 1, 2005 deadline is not technologically feasible. The Board has not added provisions related to small manufacturer exemptions or delayed implementation dates to the final-form regulation.

Several commentators indicated that the regulation should provide an indefinite “sell-through” provision for coatings manufactured prior to the compliance deadline and that requiring disposal of coating materials after three years as would be required by the proposed regulation is not environmentally acceptable. The Board agrees. The Board has revised Section 130.303(c) (relating to sell-through of architectural or industrial maintenance coatings) in the final-form regulation to allow indefinitely after January 1, 2005, the sale and use of AIM material so long as the material was formulated in compliance at the time of its manufacture.

One commentator suggested that the sell-through provisions in Section 130.303(c) (relating to sell-through of architectural or industrial maintenance coatings) should be revised to assure that parties do not stockpile large quantities of high VOC content coatings in advance of the compliance deadline. The Board disagrees that there will be significant “stockpiling” of high VOC content products. Maintenance of high levels of inventory would be expensive. In addition, many manufacturers indicate that the low-VOC content formulations perform equally as well, or better, than high-VOC content formulations, so there is no real incentive for obtaining significant inventories of high-VOC content products.

Several commentators indicated that the regulation should provide for a technology assessment to confirm the technological feasibility of the VOC content limits in the regulation. The Board disagrees. A technology assessment is not necessary in the regulation. Complying formulations are currently available for all coating categories. If complying with the VOC content limits is technologically infeasible, the manufacturer may apply to the Department for a variance under the provisions of the new Section 130.306 (relating to application for variance) added to the final-form regulation. The Board has not revised the final-form regulation to include provisions for a technology assessment.

Several commentators suggested that the regulation should be revised to eliminate unnecessary and burdensome reporting requirements. The Board disagrees. The reporting requirements in the regulation are not burdensome. The requirements do not require ongoing reporting, but rather provide the authority for the Department to obtain information from coating manufacturers when necessary. The Board has not substantively revised the reporting requirements in the final-form rulemaking.

One commentator, an AIM coatings manufacturer, indicates that the regulation will have a significant adverse impact on it, and that the Department should use its discretionary authority to issue a rule that achieves substantial VOC emission reductions beyond the National AIM rule without causing serious adverse impact on potential sales of certain products. The Board has added a new Section 130.306 (relating to application for variance) to the final-form rulemaking, to provide the opportunity for a manufacturer to request a variance from the VOC content limits

for products for which the manufacturer can show that compliance is technologically infeasible. By obtaining a variance, a manufacturer may continue to manufacture and market those products for which the manufacturer demonstrates that there are no viable alternatives.

A commentator indicated that the Department should consider adding provisions for a technology assessment to determine the appropriateness of maintaining future VOC limits. The Board disagrees. A technology assessment is not necessary in the regulation. Complying formulations are currently available for all coating categories. If complying with the VOC content limits is technologically infeasible, the manufacturer may apply to the Department for a variance under the provisions of the new Section 130.306 (relating to application for variance) added to the final-form regulation.

One commentator indicated support for the VOC content requirements in the proposed regulation, and indicated that the regulation provides adequate time (until January 1, 2005) for manufacturers to reformulate coatings to meet the VOC content limits. The Board appreciates the commentator's support and agrees that the time provided for achieving compliance should be adequate for manufacturers to reformulate coatings to compliance levels.

One commentator questioned how other states in the OTR regulate AIM coatings and if Pennsylvania's requirements are more restrictive than those in other states. Delaware has adopted a final AIM regulation. The Delaware regulation has been approved by EPA as a SIP revision. The National Paint and Coating Association (NPCA) and several coating manufacturers appealed the regulation to the Delaware Environmental Appeals Board. By a unanimous vote, the Delaware Environmental Appeals Board upheld the Delaware AIM regulation. As is the case with Pennsylvania, New York, Maryland, and New Jersey are in the process of adopting AIM regulations with VOC content limits consistent with those in the final-form Pennsylvania regulation and the final SIP-approved Delaware regulation. States outside of the OTR, other than California, have not developed additional AIM regulations.

The commentator questioned how the restriction of VOC content in coatings would affect businesses that utilize the products. The Board does not anticipate any significant adverse impacts on users of the complying formulations. The low-VOC content limits may require that certain users change their work practices to use the reformulated coatings properly. However, these changes should not be significant. It is anticipated that the use of reformulated coatings may improve productivity because the shorter drying time for many water-based formulations will allow quicker re-coating and less time at a job site or fewer return trips to the site for professional painters. Because of the lower VOC content of the coatings, workers and occupants of structures being painted will experience reduced exposure to hazardous pollutants and VOCs.

A commentator requested that, in addition to the commentator's testimony, summary of concerns and "Recommended Changes to Proposed Rulemaking of the Environmental Quality Board [25 Pa. Code Ch. 130] Architectural and Industrial Maintenance Coatings [31 Pa.B. 6807]," the Department "consider the August 30, 2001 submission to Delaware concerning Delaware's proposed adoption of the OTC AIM Coatings Model Rule." The Department has reviewed and considered the commentator's submission to Delaware, which the Department understands to have been submitted to the Board as background material and not as official comments on the

Pennsylvania rulemaking. The commentator makes most, if not all, of the same comments on the Pennsylvania rulemaking. Although the Department has reviewed and considered the comments on the Delaware rulemaking, the Department is not providing specific responses to them. The Department has provided specific responses throughout this Comment and Response document to the comments of the commentator that are submitted specifically on the Pennsylvania rulemaking.

G. Benefits, Costs and Compliance

Executive Order 1996-1 requires a cost/benefit analysis of the final regulation.

Benefits

Overall, the citizens of this Commonwealth will benefit from these changes because the changes will result in improved air quality by reducing ozone precursor emissions from architectural and industrial maintenance coatings and encourage new technologies and practices, which will reduce emissions. The final-form rulemaking will also result in reduced levels of hazardous air pollutants (HAPs) throughout this Commonwealth. In addition, the final-form rulemaking will reduce citizen exposure to a variety of VOCs, including HAPs, that are used in a variety of AIM coatings.

Compliance Costs

Under this final-form rulemaking, it is estimated that the reduction of VOC content of the affected AIM coatings will cost approximately \$6,400 per ton of VOC emissions reduced. An analysis conducted by Aberdeen Proving Grounds, however, indicates that low VOC coatings are available that will result in average savings of approximately \$1.76 per gallon compared with higher VOC coatings.

Compliance Assistance Plan

The Department plans to educate and assist the public and regulated community with understanding the new requirements and how to comply with them. This will be accomplished through the Department's compliance assistance program by direct contact and meetings with manufacturers as appropriate.

Paperwork Requirements

The regulatory revisions will not increase the paperwork that is already generated by the normal course of business practices.

H. 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.

I. Regulatory Review

Under Section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on November 29, 2001, the Department submitted a copy of the notice of proposed rulemaking, published at 31 *Pa.B.* 6807, to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the House and Senate Environmental Resources and Energy Committees for review and comment. Under Section 5(c) of the Regulatory Review Act, IRRC and the Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing these final-form regulations, the Department has considered all comments from IRRC, the Committees and the public.

Under Section 5.1(j.2) of the Regulatory Review Act, on (blank) , these final-form regulations were deemed approved by the House and Senate Committees. Under Section 5.1(e) of the Regulatory Review Act, IRRC met on (blank) and approved the final-form regulations.

J. 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) A 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 31 *Pennsylvania Bulletin* 6807 (December 15, 2001).

(4) This rulemaking is necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this order.

(5) This rulemaking is necessary for the Commonwealth to achieve and maintain ambient air quality standards.

(6) This rulemaking is necessary for the Commonwealth to avoid sanctions under the federal Clean Air Act.

K. 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*, are amended by adding §§ 130.301 -- 130.311 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 the Independent Regulatory Review Commission and the Senate and House Environmental Resources and Energy Committees as required by the Regulatory Review Act.

(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) This order shall take effect immediately.

BY:

Kathleen A. McGinty
Chairperson
Environmental Quality Board

[Editor's note: The following subchapter is new. Provisions not changed since the proposed rulemaking are printed in regular type. Changes at final-form rulemaking are underlined, appear in bold type, and are printed with capital letters.]

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES ARTICLE III. AIR RESOURCES

CHAPTER 130. STANDARDS FOR PRODUCTS

Subchapter C. ARCHITECTURAL AND INDUSTRIAL MAINTENANCE COATINGS

Sec.

- 130.301. Applicability.
- 130.302. Definitions.
- 130.303. Standards.
- 130.304. Container labeling requirements.
- 130.305. Reporting requirements.
- 130.306. APPLICATION FOR VARIANCE.**
- 130.307. VARIANCE ORDERS.**
- 130.308. TERMINATION OF VARIANCE.**
- 130.309. EXTENSION, MODIFICATION OR REVOCATION OF VARIANCE.**
- 130.310. PUBLIC HEARINGS.**
- 130.~~306~~**311.** Compliance provisions and test methods.

§ 130.301. Applicability.

This subchapter applies to a person who supplies, sells, offers for sale, ~~or~~ manufactures, **BLENDS OR REPACKAGES** an architectural or industrial maintenance coating for use within this Commonwealth, as well as a person who applies or solicits the application of an architectural or industrial maintenance coating within this Commonwealth except for:

- (1) An architectural or industrial maintenance coating that is sold or manufactured for use outside of this Commonwealth or for shipment to other manufacturers for reformulation or repackaging.

(2) An aerosol coating product.

(3) An architectural or industrial maintenance coating that is sold in a container with a volume of 1 liter (1.057 quart) or less.

§ 130.302. Definitions.

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

ADHESIVE--A CHEMICAL SUBSTANCE THAT IS APPLIED FOR THE PURPOSES OF BONDING TWO SURFACES TOGETHER OTHER THAN BY MECHANICAL MEANS.

AEROSOL COATING PRODUCT--A PRESSURIZED COATING PRODUCT CONTAINING PIGMENTS OR RESINS THAT DISPENSES PRODUCT INGREDIENTS BY MEANS OF A PROPELLANT AND IS PACKAGED IN A DISPOSABLE CAN FOR HAND-HELD APPLICATION OR FOR USE IN SPECIALIZED EQUIPMENT FOR GROUND TRAFFIC MARKING APPLICATIONS.

ANTENNA COATING--A COATING LABELED AND FORMULATED EXCLUSIVELY FOR APPLICATION TO EQUIPMENT AND ASSOCIATED STRUCTURAL APPURTENANCES THAT ARE USED TO RECEIVE OR TRANSMIT ELECTROMAGNETIC SIGNALS.

Antifouling coating--A coating labeled and formulated for application to submerged stationary structures and their appurtenances to prevent or reduce the attachment of marine or freshwater biological organisms. To qualify as an antifouling coating, the coating shall be registered with the EPA under the Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C.A. §§ 136--136y).

APPURTENANCE--AN ACCESSORY TO A STATIONARY STRUCTURE COATED AT THE SITE OF INSTALLATION, WHETHER INSTALLED OR DETACHED. THE TERM INCLUDES:

(i) BATHROOM AND KITCHEN FIXTURES.

(ii) CABINETS.

(iii) CONCRETE FORMS.

(iv) DOORS.

(v) ELEVATORS.

(vi) FENCES.

(vii) HAND RAILINGS.

**(viii) HEATING EQUIPMENT, AIR CONDITIONING EQUIPMENT, AND OTHER
FIXED MECHANICAL EQUIPMENT OR STATIONARY TOOLS.**

(ix) LAMPPOSTS.

(x) PARTITIONS.

(xi) PIPES AND PIPING SYSTEMS.

(xii) RAIN GUTTERS AND DOWNSPOUTS.

(xiii) STAIRWAYS.

(xiv) FIXED LADDERS.

(xv) CATWALKS AND FIRE ESCAPES.

(xvi) WINDOW SCREENS.

Architectural coating--A coating to be applied to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements or to curbs. Coatings applied in shop applications or to nonstationary structures such as airplanes, ships, boats, railcars and automobiles, and adhesives are not considered architectural coatings for the purposes of this rule.

Bitumens--Black or brown materials including ~~[, but not limited to,]~~ asphalt, tar, pitch and asphaltite that are soluble in carbon disulfide, consist mainly of hydrocarbons, and are obtained from natural deposits or as residues from the distillation of crude petroleum or coal.

Bituminous roof coating--A coating that incorporates bitumens that is labeled and formulated exclusively for roofing.

Bituminous roof primer--A primer that incorporates bitumens that is labeled and formulated exclusively for roofing.

Bond breaker--A coating labeled and formulated for application between layers of concrete to prevent a freshly poured top layer of concrete from bonding to the layer over which it is poured.

**CALCIMINE RECOATER--A FLAT SOLVENT-BORNE COATING FORMULATED
AND RECOMMENDED SPECIFICALLY FOR RECOATING CALCIMINE-PAINTED
CEILINGS AND OTHER CALCIMINE-PAINTED SUBSTRATES.**

CLEAR BRUSHING LACQUERS--CLEAR WOOD COATINGS FORMULATED WITH NITROCELLULOSE OR SYNTHETIC RESINS TO DRY BY SOLVENT EVAPORATION WITHOUT CHEMICAL REACTION AND TO PROVIDE A SOLID PROTECTIVE FILM, WHICH ARE INTENDED EXCLUSIVELY FOR APPLICATION BY BRUSH AND WHICH ARE LABELED AS REQUIRED IN § 130.304(A)(5) (RELATING TO CONTAINER LABELING REQUIREMENTS). THE TERM EXCLUDES CLEAR LACQUER SANDING SEALERS.

CLEAR WOOD COATINGS--CLEAR AND SEMI-TRANSPARENT COATINGS APPLIED TO WOOD SUBSTRATES TO PROVIDE A TRANSPARENT OR TRANSLUCENT FILM, INCLUDING CLEAR BRUSHING LACQUERS, CLEAR LACQUER SANDING SEALERS, SANDING SEALERS OTHER THAN CLEAR LACQUER SANDING SEALERS, AND VARNISHES.

*Coating--*An architectural or industrial maintenance coating or a material applied onto or impregnated into a substrate for protective, decorative or functional purposes. The materials include ~~[,but are not limited to,]~~ paints, varnishes, sealers and stains.

COLORANT--A CONCENTRATED PIGMENT DISPERSION IN WATER, SOLVENT OR BINDER THAT IS ADDED TO AN ARCHITECTURAL COATING AFTER PACKAGING IN SALES UNITS TO PRODUCE THE DESIRED COLOR.

*Concrete curing compound--*A coating labeled and formulated for application to freshly poured concrete to retard the evaporation of water.

CONCRETE SURFACE RETARDER--A MIXTURE OF RETARDING INGREDIENTS SUCH AS EXTENDER PIGMENTS, PRIMARY PIGMENTS, RESIN AND SOLVENT THAT INTERACT CHEMICALLY WITH CEMENT TO PREVENT HARDENING ON THE SURFACE WHERE THE RETARDER IS APPLIED, ALLOWING THE RETARDED MIX OF CEMENT AND SAND AT THE SURFACE TO BE WASHED AWAY TO CREATE AN EXPOSED AGGREGATE FINISH.

CONVERSION VARNISH--A CLEAR ACID-CURING COATING WITH AN ALKYD OR OTHER RESIN BLENDED WITH AMINO RESINS AND SUPPLIED AS A SINGLE COMPONENT OR TWO-COMPONENT PRODUCT. CONVERSION VARNISHES PRODUCE A HARD, DURABLE, CLEAR FINISH DESIGNED FOR PROFESSIONAL APPLICATION TO WOOD FLOORING. CONVERSION VARNISH FILM FORMATION IS THE RESULT OF AN ACID-CATALYZED CONDENSATION REACTION, AFFECTING A TRANSESTERIFICATION AT THE REACTIVE ETHERS OF THE AMINO RESINS.

*Dry fog coating--*A coating labeled and formulated only for spray application such that overspray droplets dry before subsequent contact with incidental surfaces in the vicinity of the surface coating activity.

Exempt compound--A compound identified as exempt under the definition of VOC ~~{that is applicable to}~~ **IN** this section. Exempt compounds content of a coating shall be determined by EPA Reference Method 24 or South Coast Air Quality Management District (SCAQMD) Method 303-91 [~~revised February 1993~~], incorporated by reference in [~~§ 130.306(e)(10)~~] **§ 130.311(e)(10)** (relating to compliance provisions and test methods).

FAUX FINISHING COATING--A COATING LABELED AND FORMULATED AS A STAIN OR GLAZE TO CREATE ARTISTIC EFFECTS INCLUDING DIRT, OLD AGE, SMOKE DAMAGE AND SIMULATED MARBLE AND WOOD GRAIN.

FIRE-RESISTIVE COATING--AN OPAQUE COATING LABELED AND FORMULATED TO PROTECT STRUCTURAL INTEGRITY BY INCREASING THE FIRE ENDURANCE OF INTERIOR OR EXTERIOR STEEL AND OTHER STRUCTURAL MATERIALS, THAT HAS BEEN FIRE TESTED AND RATED BY A TESTING AGENCY AND APPROVED BY BUILDING CODE OFFICIALS FOR USE IN BRINGING BUILDING AND CONSTRUCTION MATERIALS INTO COMPLIANCE WITH FEDERAL, STATE AND LOCAL BUILDING CODE REQUIREMENTS. THE FIRE-RESISTIVE TESTING AGENCY MUST BE APPROVED BY BUILDING CODE OFFICIALS AND MUST TEST THE COATING IN ACCORDANCE WITH ASTM E 119-98, INCORPORATED BY REFERENCE IN § 130.311(e)(2).

Fire-retardant coating--A coating labeled and formulated to retard ignition and flame spread, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with Federal, State and local building code requirements.

(i) The fire-retardant coating and the testing agency shall be approved by building code officials.

(ii) The fire-retardant coating shall be tested in accordance with ASTM E 84-99, incorporated by reference in [~~§ 130.306(e)(7)~~] **§ 130.311(e)(1)**.

Flat coating--A coating that is not defined under any other definition in this subchapter and that registers gloss less than 15 on an 85° [~~degree~~] meter or less than 5 on a 60° meter according to ASTM D 523-89 [~~(1999)~~], incorporated by reference in [~~§ 130.306(e)(3)~~] **§ 130.311(e)(3)**.

FLOOR COATING--AN OPAQUE COATING THAT IS LABELED AND FORMULATED FOR APPLICATION TO FLOORING, INCLUDING DECKS, PORCHES, STEPS AND OTHER HORIZONTAL SURFACES, WHICH MAY BE SUBJECTED TO FOOT TRAFFIC.

FLOW COATING--A COATING LABELED AND FORMULATED EXCLUSIVELY FOR USE BY ELECTRIC POWER COMPANIES OR THEIR SUBCONTRACTORS TO MAINTAIN THE PROTECTIVE COATING SYSTEMS PRESENT ON UTILITY TRANSFORMER UNITS.

FORM-RELEASE COMPOUND--A COATING LABELED AND FORMULATED FOR APPLICATION TO A CONCRETE FORM TO PREVENT FRESHLY POURED CONCRETE FROM BONDING TO THE FORM. THE FORM MAY CONSIST OF WOOD, METAL OR MATERIAL OTHER THAN CONCRETE.

GRAPHIC ARTS COATING OR SIGN PAINT--A COATING LABELED AND FORMULATED FOR HAND APPLICATION BY ARTISTS USING BRUSH OR ROLLER TECHNIQUES TO INDOOR AND OUTDOOR SIGNS (EXCLUDING STRUCTURAL COMPONENTS) AND MURALS, INCLUDING LETTER ENAMELS, POSTER COLORS, COPY BLOCKERS AND BULLETIN ENAMELS.

High-temperature coating--A high performance coating labeled and formulated for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).

IMPACTED IMMERSION COATING--A HIGH PERFORMANCE MAINTENANCE COATING FORMULATED AND RECOMMENDED FOR APPLICATION TO STEEL STRUCTURES SUBJECT TO IMMERSION IN TURBULENT, DEBRIS-LADEN WATER. THESE COATINGS ARE SPECIFICALLY RESISTANT TO HIGH-ENERGY IMPACT DAMAGE CAUSED BY FLOATING ICE OR DEBRIS.

Industrial maintenance coating--A high performance architectural coating, including primers, sealers, undercoaters, intermediate coats and topcoats, formulated for application to substrates exposed to one or more of the following extreme environmental conditions and labeled as specified in § 130.304(a)(4) (relating to container labeling requirements):

- (i) Immersion in water, wastewater or chemical solutions (aqueous and nonaqueous solutions), or chronic exposure of interior surfaces to moisture condensation.
- (ii) Acute or chronic exposure to corrosive, caustic or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions.
- (iii) Repeated exposure to temperatures above 121°C (250°F).
- (iv) Repeated (frequent) heavy abrasion, including mechanical wear and repeated scrubbing with industrial solvents, cleansers or scouring agents.
- (v) Exterior exposure of metal structures and structural components.

LACQUER--A CLEAR OR OPAQUE WOOD COATING, INCLUDING CLEAR LACQUER SANDING SEALERS, FORMULATED WITH CELLULOSIC OR SYNTHETIC RESINS TO DRY BY SOLVENT EVAPORATION WITHOUT CHEMICAL REACTION AND TO PROVIDE A SOLID, PROTECTIVE FILM.

Low-solids coating--A coating containing 0.12 kilogram or less of solids per liter (1 pound or less of solids per gallon) of coating material.

Magnesite cement coating--A coating labeled and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.

Mastic texture coating--A coating labeled and formulated to cover holes and minor cracks and to conceal surface irregularities, and applied in a single coat of at least 10 mils (0.010 inch) dry film thickness.

Metallic pigmented coating--A coating containing at least 48 grams of elemental metallic pigment per liter of coating as applied (0.4 pounds per gallon), when tested in accordance with SCAQMD Method 318-95, incorporated by reference in ~~§ 130.306(e)(4)~~ § 130.311(e)(4).

MULTI-COLOR COATING--A COATING THAT IS PACKAGED IN A SINGLE CONTAINER AND THAT EXHIBITS MORE THAN ONE COLOR WHEN APPLIED IN A SINGLE COAT.

Nonflat coating--A coating that is not defined under any other definition in this subchapter and that registers a gloss of 15 or greater on an 85[°]~~[-degree]~~ meter and 5 or greater on a 60[°]~~[-degree]~~ meter according to ASTM D 523-89 ~~{(1999)}~~, incorporated by reference in ~~§ 130.306(e)(3)~~ § 130.311(e)(3).

Nonflat high gloss coating--A nonflat coating that registers a gloss of 70 or above on a 60[°]~~[-degree]~~ meter according to ASTM D 523-89 ~~{(1999)}~~, incorporated by reference in ~~§ 130.306(e)(3)~~ § 130.311(e)(3).

NON-INDUSTRIAL USE--USE OF ARCHITECTURAL COATINGS EXCEPT IN THE CONSTRUCTION OR MAINTENANCE OF THE FOLLOWING:

(i) FACILITIES USED IN THE MANUFACTURING OF GOODS OR COMMODITIES.

(ii) TRANSPORTATION INFRASTRUCTURE, INCLUDING HIGHWAYS, BRIDGES, AIRPORTS AND RAILROADS.

(iii) FACILITIES USED IN MINING ACTIVITIES, INCLUDING PETROLEUM EXTRACTION.

(iv) UTILITIES INFRASTRUCTURE, INCLUDING POWER GENERATION AND DISTRIBUTION, AND WATER TREATMENT AND DISTRIBUTION SYSTEMS.

NUCLEAR COATING--A PROTECTIVE COATING FORMULATED AND RECOMMENDED TO SEAL POROUS SURFACES SUCH AS STEEL (OR CONCRETE) THAT OTHERWISE WOULD BE SUBJECT TO INTRUSIONS BY RADIOACTIVE MATERIALS. THESE COATINGS MUST BE RESISTANT TO LONG-TERM (SERVICE LIFE) CUMULATIVE RADIATION EXPOSURE AS DETERMINED BY ASTM METHOD D 4082-89, INCORPORATED BY REFERENCE IN § 130.311(e)(14), RELATIVELY EASY TO DECONTAMINATE, AND RESISTANT

TO VARIOUS CHEMICALS TO WHICH THE COATINGS ARE LIKELY TO BE EXPOSED AS DETERMINED BY ASTM METHOD D 3912-80, INCORPORATED BY REFERENCE IN § 130.311(e)(15).

POST-CONSUMER COATING--A FINISHED COATING THAT WOULD HAVE BEEN DISPOSED OF IN A LANDFILL, HAVING COMPLETED ITS USEFULNESS TO A CONSUMER. THE TERM DOES NOT INCLUDE MANUFACTURING WASTES.

Pretreatment wash primer--A primer that contains a minimum of 0.5% acid, by weight, when tested in accordance with ASTM D 1613-96, incorporated by reference in ~~§ 130.306(e)(5)~~ § 130.311(e)(5), that is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.

PRIMER--A COATING LABELED AND FORMULATED FOR APPLICATION TO A SUBSTRATE TO PROVIDE A FIRM BOND BETWEEN THE SUBSTRATE AND SUBSEQUENT COATS.

Quick-dry enamel--A nonflat coating that is labeled as specified in § 130.304(a)(8) and that is formulated to have the following characteristics:

- (i) Is capable of being applied directly from the container under normal conditions with ambient temperatures between 16 and 27°C (60° and 80°F).
- (ii) When tested in accordance with ASTM D 1640-95, incorporated by reference in ~~§ 130.306(e)(6)~~ § 130.311(e)(6), sets to touch in 2 hours or less, is tack-free in 4 hours or less, and dries hard in 8 hours or less by the mechanical test method.
- (iii) Has a dried film gloss of 70 or above on a 60-degree meter according to ASTM D523-89.

Quick-dry primer, sealer and undercoater--A primer, sealer or undercoater that is dry to the touch in 30 minutes and can be recoated in 2 hours when tested in accordance with ASTM D 1640-95, incorporated by reference in ~~§ 130.306(e)(6)~~ § 130.311(e)(6).

Recycled coating--An architectural coating formulated so that at least 50% of the total weight consists of secondary and postconsumer coating, with at least 10% of the total weight consisting of postconsumer coating.

RESIDENCE--AN AREA IN WHICH PEOPLE RESIDE OR LODGE, INCLUDING A SINGLE OR MULTIPLE FAMILY DWELLING, CONDOMINIUM, MOBILE HOME, APARTMENT COMPLEX, MOTEL OR HOTEL.

Roof coating--A nonbituminous coating labeled and formulated exclusively for application to roofs for the primary purpose of preventing penetration of the substrate by water or reflecting heat and ultraviolet radiation. Metallic pigmented roof coatings, which qualify as metallic pigmented coatings, will not be considered in this category, but will be considered to be in the metallic pigmented coatings category.

Rust-preventive coating--A coating formulated exclusively for nonindustrial use to prevent the corrosion of metal surfaces and labeled as specified in § 130.304(a)(6).

SANDING SEALER--A CLEAR WOOD COATING LABELED AND FORMULATED FOR APPLICATION TO BARE WOOD TO SEAL THE WOOD AND TO PROVIDE A COAT THAT CAN BE ABRADED TO CREATE A SMOOTH SURFACE FOR SUBSEQUENT APPLICATION OF COATINGS. THE TERM DOES NOT INCLUDE A SANDING SEALER THAT MEETS THE DEFINITION OF A LACQUER.

SEALER--A COATING LABELED AND FORMULATED FOR APPLICATION TO A SUBSTRATE TO PREVENT SUBSEQUENT COATINGS FROM BEING ABSORBED BY THE SUBSTRATE, OR TO PREVENT HARM TO SUBSEQUENT COATINGS BY MATERIALS IN THE SUBSTRATE.

SECONDARY COATING (REWORK)--A FRAGMENT OF A FINISHED COATING OR A FINISHED COATING FROM A MANUFACTURING PROCESS THAT HAS CONVERTED RESOURCES INTO A COMMODITY OF REAL ECONOMIC VALUE. THE TERM DOES NOT INCLUDE EXCESS VIRGIN RESOURCES OF THE MANUFACTURING PROCESS.

SHELLAC--A CLEAR OR OPAQUE COATING FORMULATED SOLELY WITH THE RESINOUS SECRETIONS OF THE LAC BEETLE (LACIFFER LACCA), THINNED WITH ALCOHOL, AND FORMULATED TO DRY BY EVAPORATION WITHOUT A CHEMICAL REACTION.

SHOP APPLICATION--THE APPLICATION OF A COATING TO A PRODUCT OR A COMPONENT OF A PRODUCT IN OR ON THE PREMISES OF A FACTORY OR SHOP AS PART OF A MANUFACTURING, PRODUCTION OR REPAIRING PROCESS, SUCH AS ORIGINAL EQUIPMENT MANUFACTURING COATINGS).

SOLICIT--TO REQUIRE FOR USE OR TO SPECIFY, BY WRITTEN OR ORAL CONTRACT.

Specialty primer, sealer and undercoater--A coating labeled as specified in § 130.304(a)(7) and that is formulated for application to a substrate to seal fire, smoke or water damage; to condition excessively chalky surfaces; or to block stains **OR EFFLORESCENCE**. An excessively chalky surface is one that is defined as having a chalk rating of four or less as determined by ASTM D 4214-98, incorporated by reference in ~~130.306(e)(7)~~§ 130.311(e)(7).

STAIN--A CLEAR, SEMI-TRANSPARENT OR OPAQUE COATING LABELED AND FORMULATED TO CHANGE THE COLOR OF A SURFACE, BUT NOT TO CONCEAL THE GRAIN PATTERN OR TEXTURE.

SWIMMING POOL COATING--A COATING LABELED AND FORMULATED TO COAT THE INTERIOR OF A SWIMMING POOL AND TO RESIST SWIMMING POOL CHEMICALS.

SWIMMING POOL REPAIR AND MAINTENANCE COATING--A RUBBER-BASED COATING LABELED AND FORMULATED TO BE USED OVER EXISTING RUBBER-BASED COATINGS FOR THE REPAIR AND MAINTENANCE OF SWIMMING POOLS.

Temperature-indicator safety coating--A coating labeled and formulated as a color-changing indicator coating for the purpose of monitoring the temperature and safety of the substrate, underlying piping, or underlying equipment, and for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).

THERMOPLASTIC RUBBER COATING AND MASTIC--A COATING OR MASTIC FORMULATED AND RECOMMENDED FOR APPLICATION TO ROOFING OR OTHER STRUCTURAL SURFACES AND THAT INCORPORATES NO LESS THAN 40% BY WEIGHT OF THERMOPLASTIC RUBBERS IN THE TOTAL RESIN SOLIDS THAT MAY ALSO CONTAIN OTHER INGREDIENTS INCLUDING FILLERS, PIGMENTS AND MODIFYING RESINS.

TINT BASE--AN ARCHITECTURAL COATING TO WHICH COLORANT IS ADDED AFTER PACKAGING IN SALE UNITS TO PRODUCE A DESIRED COLOR.

TRAFFIC MARKING COATING--A COATING LABELED AND FORMULATED FOR MARKING AND STRIPING STREETS, HIGHWAYS OR OTHER TRAFFIC SURFACES INCLUDING CURBS, BERMS, DRIVEWAYS, PARKING LOTS, SIDEWALKS AND AIRPORT RUNWAYS.

UNDERCOATER--A COATING LABELED AND FORMULATED TO PROVIDE A SMOOTH SURFACE FOR SUBSEQUENT COATINGS.

VARNISH--A CLEAR WOOD COATING, EXCLUDING LACQUERS AND SHELLACS, FORMULATED TO DRY BY CHEMICAL REACTION ON EXPOSURE TO AIR. VARNISH MAY CONTAIN SMALL AMOUNTS OF PIGMENT TO COLOR A SURFACE OR TO CONTROL THE FINAL SHEEN OR GLOSS OF THE FINISH.

VOC--Volatile organic compound--For the purposes of this subchapter, the term means any volatile compound containing at least one atom of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate, and:

- (i) Excluding the following:
 - (A) Methane.
 - (B) Methylene chloride (dichloromethane).
 - (C) 1,1,1-trichloroethane (methyl chloroform).

- (D) trichlorofluoromethane (CFC-11).
- (E) Dichlorodifluoromethane (CFC-12).
- (F) 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113).
- (G) 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114).
- (H) Chloropentafluoroethane (CFC-115).
- (I) Chlorodifluoromethane (HCFC-22).
- (J) 1,1,1-trifluoro-2,2-dichloroethane (HCFC-123).
- (K) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124).
- (L) 1,1-dichloro-1-fluoroethane (HCFC-141b).
- (M) 1-chloro-1,1-difluoroethane (HCFC-142b).
- (N) Trifluoromethane (HFC-23).
- (O) Pentafluoroethane (HFC-125).
- (P) 1,1,2,2-tetrafluoroethane (HFC-134).
- (Q) 1,1,1,2-tetrafluoroethane (HFC-134a).
- (R) 1,1,1-trifluoroethane (HFC-143a).
- (S) 1,1-difluoroethane (HFC-152a).
- (T) Cyclic, branched or linear, completely methylated siloxanes.
- (ii) Excluding the following classes of perfluorocarbons:
 - (A) Cyclic, branched or linear, completely fluorinated alkanes.
 - (B) Cyclic, branched or linear, completely fluorinated ethers with no unsaturations.
 - (C) Cyclic, branched or linear, completely fluorinated tertiary amines with no unsaturations.
 - (D) Sulfur-containing perfluorocarbons with no unsaturations and with the sulfur bonds only to carbon and fluorine.

(iii) Excluding the following low-reactive organic compounds which have been exempted by the U.S. EPA:

- (A) Acetone.
- (B) Ethane.
- (C) Parachlorobenzotrifluoride (1-chloro-4-trifluoro- methyl benzene).
- (D) Perchloroethylene.
- (E) Methyl acetate.

VOC content--The weight of VOC per volume of coating, calculated according to the procedures specified in ~~§ 130.306(a)~~ § 130.311(a).

WATERPROOFING SEALER--A COATING LABELED AND FORMULATED FOR APPLICATION TO A POROUS SUBSTRATE FOR THE PRIMARY PURPOSE OF PREVENTING THE PENETRATION OF WATER.

WATERPROOFING CONCRETE/MASONRY SEALER-- A CLEAR OR PIGMENTED FILM-FORMING COATING THAT IS LABELED AND FORMULATED FOR SEALING CONCRETE AND MASONRY TO PROVIDE RESISTANCE AGAINST WATER, ALKALIS, ACIDS, ULTRAVIOLET LIGHT AND STAINING.

Wood preservative--A coating labeled and formulated to protect exposed wood from decay or insect attack, that is registered with the EPA under the Federal Insecticide, Fungicide, and Rodenticide Act.

§ 130.303. Standards.

(a) *VOC content limits.* Except as provided in subsections (b), (c) and ~~{(h)}~~ (g), a person after January 1, 2005, may not:

(1) Manufacture, blend or repackage for sale within this Commonwealth a coating subject to this subchapter **WITH A VOC CONTENT IN EXCESS OF THE CORRESPONDING LIMIT SPECIFIED IN TABLE 1.**

(2) Supply, sell or offer for sale within this Commonwealth a coating subject to this subchapter **WITH A VOC CONTENT IN EXCESS OF THE CORRESPONDING LIMIT SPECIFIED IN TABLE 1.**

(3) Solicit for application or apply within this Commonwealth, ~~[an architectural or industrial maintenance]~~ A coating **SUBJECT TO THIS SUBCHAPTER** with a VOC content in excess of the corresponding limit specified in Table 1.

(b) *Most restrictive VOC limit.* If on the container of an architectural or industrial maintenance coating, or a label or sticker affixed to the container, or in sales, advertising or technical literature supplied by a manufacturer or a person acting on their behalf, a representation is made that indicates that the coating meets the definition of or is recommended for use for more than one of the coating categories listed in Table 1, then the most restrictive VOC content limit applies. This provision does not apply to the following coating categories:

- (1) Lacquer coatings (including lacquer sanding sealers).
- (2) Metallic pigmented coatings.
- (3) Shellacs.
- (4) Fire-retardant coatings.
- (5) Pretreatment wash primers.
- (6) Industrial maintenance coatings.
- (7) Low-solids coatings.
- (8) Wood preservatives.
- (9) High-temperature coatings.
- (10) Temperature-indicator safety coatings.
- (11) Antenna coatings.
- (12) Antifouling coatings.
- (13) Flow coatings.
- (14) Bituminous roof primers.
- (15) Specialty primers, sealers and undercoaters.
- (16) CALCIMINE RECOATERS.**
- (17) IMPACTED IMMERSION COATINGS.**
- (18) NUCLEAR COATINGS.**
- (19) THERMOPLASTIC RUBBER COATINGS AND MASTIC.**

(c) *Sell-through of architectural or industrial maintenance coatings.* An architectural or industrial maintenance coating manufactured prior to JANUARY 1, 2005 [~~*Editor's Note: The blank refers to the effective date of adoption of this proposal.*~~] may be sold, supplied, [or] offered for sale OR APPLIED until _____ [~~*Editor's Note: The blank refers to a date 3 years after the effective date of adoption of this proposal.*~~]. In addition, an architectural or industrial maintenance coating manufactured before _____ [~~*Editor's Note: The blank refers to the effective date of adoption of this proposal.*~~] may be applied, both before and after JANUARY 1, 2005 [~~*Editor's Note: The blank refers to the effective date of adoption of this proposal.*~~] so long as the architectural or industrial maintenance coating complied with the standards in effect at the time the coating was manufactured. [~~**This subsection does not apply to an architectural or industrial maintenance coating that does not display the date or date code required by § 130.304(a) (relating to container labeling requirements).**~~]

~~**(d) *Painting practices.* Architectural or industrial maintenance coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. These containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers of any VOC-containing materials used for thinning and cleanup shall also be closed when not in use.**~~

~~**(e) (d) *Thinning.* [A person who applies or solicits the application of an architectural or industrial maintenance coating may not apply a coating that is thinned to exceed the applicable VOC limit specified in Table 1.] A PERSON MAY NOT APPLY OR SOLICIT THE APPLICATION OF AN ARCHITECTURAL AND INDUSTRIAL MAINTENANCE COATING THAT IS THINNED TO EXCEED THE APPLICABLE VOC LIMIT SPECIFIED IN TABLE 1.**~~

~~**(f) (e) *Rust-preventive coatings.***~~ A person may not apply or solicit the application of a rust-preventive coating for industrial use, unless the rust-preventive coating complies with the industrial maintenance coating VOC limit specified in Table 1.

~~**(g) (f) *Coatings not listed in Table 1.***~~ For an architectural or industrial maintenance coating that does not meet the definitions for the specialty coatings categories listed in Table 1, the VOC content limit shall be determined by classifying the coating as a flat coating or a nonflat coating, based on its gloss as defined in § 130.302 (relating to definitions), and the corresponding flat or nonflat coating limit applies.

~~**(h) (g) *Lacquers.***~~ Notwithstanding the provisions of subsection (a), a person or facility may add up to 10% by volume of VOC to a lacquer to avoid blushing of the finish during days with relative humidity greater than 70% and temperature below 65°F, at the time of application, provided that the coating contains acetone and no more than 550 grams of VOC per liter of coating, less water and exempt compounds, prior to the addition of VOC.

Table 1

VOC Content Limits for Architectural and Industrial Maintenance Coatings

The VOC content limits are effective on January 1, 2005, and are expressed in grams of VOC per liter¹ of coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water, exempt compounds, or colorant added to tint bases. “[Manufacturers' **MANUFACTURER'S** maximum recommendation” means the maximum recommendation for thinning that is indicated on the label or lid of the coating container.

<i>Coating Category</i>	<i>VOC Content Limit</i>
<i>Nonspecialty Coatings</i>	
Flat Coatings	100
Nonflat Coatings	150
Nonflat High Gloss Coatings	250
<i>Specialty Coatings</i>	
Antenna Coatings	530
Antifouling Coatings	400
Bituminous Roof Coatings	300
Bituminous Roof Primers	350
Bond Breakers	350
<u>CALCIMINE RECOATERS</u>	<u>475</u>
Clear Wood Coatings	
* Clear Brushing Lacquers	680
* <u>CONVERSION VARNISH</u>	<u>725</u>
<u>[* Lacquers (including lacquer sanding sealers)]</u>	<u>[550]</u>
* Sanding Sealers (other than lacquer sanding sealers)	350
* Varnishes	350
Concrete Curing Compounds	350
<u>CONCRETE SURFACE RETARDERS</u>	<u>780</u>
Dry Fog Coatings	400
Faux Finishing Coatings	350
Fire-Resistive Coatings	350

¹ Conversion factor: 1 pound VOC per gallon (U.S.) = 119.95 grams per liter.

Fire-Retardant Coatings	
* Clear	650
* Opaque	350
Floor Coatings	250
Flow Coatings	420
Form-Release Compounds	250
Graphic Arts Coatings (Sign Paints)	500
High-Temperature Coatings	420
<u>IMPACTED IMMERSION COATINGS</u>	<u>780</u>
Industrial Maintenance Coatings	340
<u>LACQUERS (INCLUDING LACQUER SANDING SEALERS)</u>	<u>550</u>
Low-Solids Coatings	120 ²
Magnesite Cement Coatings	450
Mastic Texture Coatings	300
Metallic Pigmented Coatings	500
Multi-Color Coatings	250
<u>NUCLEAR COATINGS</u>	<u>450</u>
Pretreatment Wash Primers	420
Primers, Sealers, and Undercoaters	200
Quick-Dry Enamels	250
Quick-Dry Primers, Sealers and Undercoaters	200
Recycled Coatings	250
Roof Coatings	250
Rust-Preventative Coatings	400
Shellacs	
* Clear	730
* Opaque	550
Specialty Primers, Sealers, and Undercoaters	350
Stains	250
Swimming Pool Coatings	340
Swimming Pool Repair and Maintenance Coatings	340
Temperature-Indicator Safety Coatings	550

² **INCLUDING WATER AND EXEMPT SOLVENTS**

THERMOPLASTIC RUBBER COATINGS AND MASTIC **550**

Traffic Marking Coatings	150
Waterproofing Sealers	250
Waterproofing Concrete/Masonry Sealers	400
Wood Preservatives	350

§ 130.304. Container labeling requirements.

(a) Effective January 1, 2005, each manufacturer of architectural or industrial maintenance coatings subject to this subchapter shall display the information listed in paragraphs (1)--(~~8~~ 9) on the coating container (or label) in which the coating is sold or distributed.

(1) *Date code.* The date the architectural or industrial maintenance coating was manufactured, or a date code representing the date, shall be indicated on the label, lid or bottom of the container. If the manufacturer uses a date code for a coating, the manufacturer shall file an explanation of each code with the Department **upon BY** _____ (*Editor's Note: The blank refers to A DATE 30 DAYS AFTER the [effective] date of adoption of this [proposal] FINAL RULEMAKING.) OR THE DATE ON WHICH THE DATE CODE WILL FIRST BE USED, WHICHEVER IS LATER.*

(2) *Thinning recommendations.* A statement of the manufacturer's recommendation regarding thinning of the architectural or industrial maintenance coating shall be indicated on the label or lid of the container. This requirement does not apply to the thinning of architectural or industrial maintenance coatings with water. If thinning of the coating prior to use is not necessary, the recommendation shall specify that the coating is to be applied without thinning.

(3) *VOC content.* Each container of a coating subject to this subchapter shall display either the maximum or the actual VOC content of the coating, as supplied, including the maximum thinning as recommended by the manufacturer. VOC content shall be displayed in grams of VOC per liter of coating. VOC content displayed shall be calculated using product formulation data, or shall be determined using the test methods in ~~§ 130.606~~ **§ 130.311** (relating to compliance provisions and test methods). The equations in ~~§ 130.306(a)(1) and (2)~~ **§ 130.311(a)(1) and (2)** shall be used to calculate VOC content.

(4) *Industrial maintenance coatings.* ~~In addition to the information specified in paragraphs (1)–(3), each~~ **EACH** manufacturer of an industrial maintenance coating ~~[subject to this subchapter]~~ shall display on the label or the lid of the container in which the coating is sold or distributed one or more of the following descriptions:

- (i) “For industrial use only.”
- (ii) “For professional use only.”

(iii) "Not for residential use."

(iv) "Not intended for residential use."

(5) *Clear brushing lacquers.* The labels of clear brushing lacquers shall prominently display the statements, "For brush application only," and, "This product must not be thinned or sprayed."

(6) *Rust-preventive coatings.* The labels of rust-preventive coatings shall prominently display the statement, "For Metal Substrates Only."

(7) *Specialty primers, sealers and undercoaters.* The labels of specialty primers, sealers and undercoaters shall prominently display one or more of the following descriptions:

(i) ~~For blocking stains.~~

(ii) ~~For fire-damaged substrates.~~

(iii) ~~For smoke-damaged substrates.~~

(iv) ~~For water-damaged substrates.~~

(v) ~~For excessively chalky substrates.~~

(8) *Quick-dry enamel.* The labels of quick-dry enamels shall prominently display the words, "Quick Dry" and the dry-hard time.

(9) *Nonflat high gloss coatings.* The labels of nonflat high gloss coatings shall prominently display the words, "High Gloss."

§ 130.305. Reporting requirements.

Upon request ~~by~~ **OF** the Department, each manufacturer of an architectural or industrial maintenance coating subject to this subchapter shall, on or before April 1 of each calendar year beginning in the year 2006, submit an annual report to the Department. The report shall specify the number of gallons of coating sold in the ~~State~~ **THE COMMONWEALTH** during the preceding calendar year and shall describe the method used by the manufacturer to calculate ~~State~~ sales **WITHIN THE COMMONWEALTH.**

§ 130.306. APPLICATION FOR VARIANCE.

(a) A PERSON WHO CANNOT COMPLY WITH § 130.303(a) MAY APPLY IN WRITING TO THE DEPARTMENT FOR A VARIANCE. THE VARIANCE APPLICATION SHALL SET FORTH:

(1) THE SPECIFIC GROUNDS UPON WHICH THE VARIANCE IS SOUGHT.

(2) THE PROPOSED DATE BY WHICH COMPLIANCE WITH § 130.303(a) WILL BE ACHIEVED.

(3) A COMPLIANCE REPORT DETAILING THE METHODS BY WHICH COMPLIANCE WILL BE ACHIEVED.

(b) NO LATER THAN 90 DAYS AFTER RECEIPT OF A COMPLETE VARIANCE APPLICATION CONTAINING THE INFORMATION REQUIRED IN THIS SECTION, THE DEPARTMENT WILL HOLD A PUBLIC HEARING IN ACCORDANCE WITH § 130.310 (RELATING TO PUBLIC HEARINGS) TO DETERMINE THE FOLLOWING:

(1) WHETHER A VARIANCE FROM THE REQUIREMENTS IN § 130.303(a) IS NECESSARY.

(2) UNDER WHAT CONDITIONS A VARIANCE FROM THE REQUIREMENTS IN § 130.303(a) IS NECESSARY.

(3) TO WHAT EXTENT A VARIANCE FROM THE REQUIREMENTS IN § 130.303(a) IS NECESSARY.

(c) THE DEPARTMENT WILL NOT GRANT A VARIANCE UNLESS THE APPLICANT DEMONSTRATES IN WRITING THE FOLLOWING TO THE DEPARTMENT'S SATISFACTION:

(1) THAT IT IS TECHNOLOGICALLY INFEASIBLE FOR THE APPLICANT TO COMPLY WITH THE REQUIREMENTS OF § 130.303(a).

(2) THAT THE PUBLIC INTEREST IN ISSUING THE VARIANCE WOULD OUTWEIGH THE PUBLIC INTEREST IN AVOIDING INCREASED EMISSIONS OF AIR CONTAMINANTS THAT WOULD RESULT FROM ISSUING THE VARIANCE.

(3) THAT THE COMPLIANCE PROGRAM PROPOSED BY THE APPLICANT CAN REASONABLY BE IMPLEMENTED AND WILL ACHIEVE COMPLIANCE AS EXPEDITIOUSLY AS POSSIBLE.

§ 130.307. VARIANCE ORDERS.

(a) A VARIANCE ORDER WILL SPECIFY A FINAL COMPLIANCE DATE BY WHICH THE REQUIREMENTS OF § 130.303 (RELATING TO STANDARDS) MUST BE ACHIEVED. A VARIANCE ORDER WILL CONTAIN A CONDITION THAT SPECIFIES INCREMENTS OF PROGRESS NECESSARY TO ASSURE TIMELY COMPLIANCE AND OTHER CONDITIONS THAT THE DEPARTMENT DETERMINES TO BE NECESSARY, IN CONSIDERATION OF THE TESTIMONY

RECEIVED AT THE PUBLIC HEARING HELD IN ACCORDANCE WITH § 130.310 (RELATING TO PUBLIC HEARINGS), WRITTEN COMMENTS AND OTHER INFORMATION AVAILABLE TO THE DEPARTMENT.

(b) THE DEPARTMENT WILL SUBMIT EACH VARIANCE ORDER TO THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY FOR APPROVAL AS A STATE IMPLEMENTATION PLAN REVISION.

§ 130.308. TERMINATION OF VARIANCE.

A VARIANCE WILL CEASE TO BE EFFECTIVE UPON FAILURE OF THE PARTY TO WHOM THE VARIANCE WAS GRANTED TO COMPLY WITH A TERM OR CONDITION OF THE VARIANCE.

§ 130.309. EXTENSION, MODIFICATION OR REVOCATION OF VARIANCE.

THE DEPARTMENT MAY, FOR GOOD CAUSE, INCLUDING AIR QUALITY CONSIDERATIONS, EXTEND, MODIFY OR REVOKE A VARIANCE FROM THE REQUIREMENTS OF §130.303(a) (RELATING TO STANDARDS) AFTER HOLDING A PUBLIC HEARING IN ACCORDANCE WITH § 130.310 (RELATING TO PUBLIC HEARINGS).

§ 130.310. PUBLIC HEARINGS.

(a) PRIOR TO ISSUANCE, EXTENSION, MODIFICATION OR REVOCATION OF A VARIANCE ORDER, THE DEPARTMENT WILL HOLD A PUBLIC HEARING TO TAKE PUBLIC COMMENT ON THE APPLICATION FOR A VARIANCE OR ON THE PROPOSED EXTENSION, MODIFICATION OR REVOCATION OF A VARIANCE ORDER.

(b) THE DEPARTMENT WILL PUBLISH NOTICE OF THE TIME, PLACE AND PURPOSE OF THE HEARING IN NEWSPAPERS OF GENERAL CIRCULATION AND IN THE *PENNSYLVANIA BULLETIN* NOT LESS THAN 30 DAYS PRIOR TO THE HEARING.

(c) NOT LESS THAN 30 DAYS PRIOR TO THE HEARING, THE DEPARTMENT WILL MAKE AVAILABLE TO THE PUBLIC THE FOLLOWING:

(1) THE APPLICATION FOR THE VARIANCE OR, IF THE HEARING IS FOR AN EXTENSION, MODIFICATION OR REVOCATION, THE VARIANCE ORDER.

(2) THE PROPOSED ORDER FOR ISSUING, EXTENDING, MODIFYING OR REVOKING THE VARIANCE.

§ 130.[306]311. Compliance provisions and test methods.

(a) *Calculation of VOC content.* For the purpose of determining compliance with the VOC content limits in § 130.303 Table 1 (relating to VOC content limits for architectural and industrial maintenance coatings), the VOC content of a coating shall be determined by using the procedures described in this subsection or subsection (b), as appropriate. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured.

(1) With the exception of low solids coatings, determine the VOC content in grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, excluding the volume of water and exempt compounds. Determine the VOC content using Equation 1 as follows:

$$\text{Equation 1: VOC Content} = \frac{(W_s - W_w - W_{ec})}{(V_m - V_w - V_{ec})}$$

Where:

VOC content = grams of VOC per liter of coating

W_s = weight of volatiles, in grams

W_w = weight of water, in grams

W_{ec} = weight of exempt compounds, in grams

V_m = volume of coating, in liters

V_w = volume of water, in liters

V_{ec} = volume of exempt compounds, in liters

(2) For low solids coatings, determine the VOC content in units of grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, including the volume of any water and exempt compounds. Determine the VOC content using Equation 2 as follows:

$$\text{Equation 2: VOC Content (ls)} = \frac{(W_s - W_w - W_{ec})}{(V_m)}$$

Where:

VOC Content (ls) = the VOC content of a low solids coating in grams per liter of coating

W_s = weight of volatile, in grams

W_w = weight of water, in grams

W_{ec} = weight of exempt compounds, in grams

V_m = volume of coating, in liters

(b) *VOC content of coatings.* To determine the physical properties of a coating in order to perform the calculations in subsection[s] (a)[~~and (b)~~], the reference method for VOC content is EPA Reference Method 24, [~~incorporated by reference in this section,~~] except as provided in subsections (c) and (d). An alternative method to determine the VOC content of coatings is SCAQMD Method 304-91 [~~(revised February 1996)~~], incorporated by reference in this section.

The exempt compounds content shall be determined by SCAQMD Method 303-91 [~~revised August 1996~~], incorporated by reference in subsection (e) [~~(d)(10)~~]. To determine the VOC content of a coating, the manufacturer may use EPA Reference Method 24, or an alternative method, as provided in subsection (c), formulation data, or another reasonable means for predicting that the coating has been formulated as intended--for example, quality assurance checks and recordkeeping. If there are inconsistencies between the results of a Reference Method 24 test and another means for determining VOC content, the Reference Method 24 results will govern, except when an alternative method is approved as specified in ~~130.306(e)~~ **§ 130.311(c)**. The Department may require the manufacturer to conduct a Reference Method 24 analysis.

(c) *Alternative test methods.* Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with subsection (b) may be used if approved in writing by the Department and the EPA.

(d) *Methacrylate traffic coating markings.* Analysis of methacrylate multi-component coatings used as traffic marking coatings shall be conducted according to a modification of EPA Reference Method 24 (found at 40 CFR 59, Subpart D, Appendix A), incorporated by reference in subsection (e)(13). This method has not been approved for methacrylate multicomponent coatings used for other purposes than as traffic marking coatings or for other classes of multicomponent coatings.

(e) *Test methods.* The following test methods are incorporated herein by reference and **THE MOST UP-TO-DATE VERSION OF THE TEST METHOD** shall be used to test coatings subject to the provisions of this rule:

(1) *Flame spread index.* The flame spread index of a fire-retardant coating shall be determined by ASTM E 84-99, "Standard Test Method for Surface Burning Characteristics of Building Materials."

(2) *Fire-resistance rating.* The fire-resistance rating of a fire-resistive coating shall be determined by ASTM E 119-98, "Standard Test Methods for Fire Tests of Building Construction Materials."

(3) *Gloss determination.* The gloss of a coating shall be determined by ASTM D 523-89 [~~1999~~], "Standard Test Method for Specular Gloss."

(4) *Metal content of coatings.* The metallic content of a coating shall be determined by SCAQMD Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction," SCAQMD "Laboratory Methods of Analysis for Enforcement Samples."

(5) *Acid content of coatings.* The acid content of a coating shall be determined by ASTM D 1613-96, "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer and Related Products."

(6) *Drying times.* The set-to-touch, dry-hard, dry-to-touch and dry-to-recoat times of a coating shall be determined by ASTM D 1640-95, "Standard Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature," (see ~~section~~ § 130.302, **(RELATING TO DEFINITIONS) FOR DEFINITIONS OF** QuickDry Enamel and Quick-Dry Primer, Sealer, and Undercoater). The tack-free time of a quick-dry enamel coating shall be determined by the mechanical test method of ASTM D 1640-95.

(7) *Surface chalkiness.* The chalkiness of a surface shall be determined using ASTM D 4214-98, "Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films."

(8) *Exempt compounds--siloxanes.* Exempt compounds that are cyclic, branched or linear, completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with this section by BAAQMD Method 43, "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials," Bay Area Air Quality Management District (BAAQMD) Manual of Procedures, Volume III, ~~adopted November 6, 1996~~.

(9) *Exempt compounds--parachlorobenzotrifluoride (PCBTF).* The exempt compound parachlorobenzo-trifluoride shall be analyzed as an exempt compound for compliance with this section by BAAQMD Method 41, "Determination of Volatile Organic Compounds in Solvent-Based Coatings and Related Materials Containing Parachlorobenzotrifluoride," found in BAAQMD Manual of Procedures, Volume III, ~~adopted December 20, 1995~~.

(10) *Exempt compounds.* The content of compounds exempt under EPA Method 24 shall be analyzed by SCAQMD Method 303-91 ~~[(Revised 1993)]~~, "Determination of Exempt Compounds," found in SCAQMD "Laboratory Methods of Analysis for Enforcement Samples."

(11) *VOC content of coatings.* The VOC content of a coating shall be ~~determined~~ **ANALYZED** by EPA Method 24 found in "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings."

(12) *Alternative VOC content of coatings.* The VOC content of coatings may be analyzed by either EPA Reference Method 24 or SCAQMD Method 304-91 ~~[(Revised 1996)]~~, "Determination of Volatile Organic Compounds (VOC) in Various Materials," found in "SCAQMD Laboratory Methods of Analysis for Enforcement Samples."

(13) *Methacrylate traffic marking coatings.* The VOC content of methacrylate multicomponent coatings used as traffic marking coatings shall be analyzed by the procedures in 40 CFR Part 59, Subpart D, Appendix A, "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings," ~~[(September 11, 1998).]~~

(14) RADIATION RESISTANCE. THE RADIATION RESISTANCE OF A NUCLEAR COATING SHALL BE DETERMINED BY ASTM METHOD D 4082-89, "STANDARD TEST METHOD FOR EFFECTS OF GAMMA RADIATION ON COATINGS FOR USE IN LIGHT-WATER NUCLEAR POWER PLANTS."

(15) CHEMICAL RESISTANCE. THE CHEMICAL RESISTANCE OF NUCLEAR COATINGS SHALL BE DETERMINED BY ASTM METHOD D 3912-80, "STANDARD TEST METHOD FOR CHEMICAL RESISTANCE OF COATINGS USED IN LIGHT-WATER NUCLEAR POWER PLANTS."

**TRANSMITTAL SHEET FOR REGULATIONS SUBJECT TO THE
REGULATORY REVIEW ACT**

I.D. NUMBER: 7-371
 SUBJECT: Architectural & Industrial Maintenance (AIM) Coatings
 AGENCY: DEPARTMENT OF ENVIRONMENTAL PROTECTION

TYPE OF REGULATION

- Proposed Regulation
- X Final Regulation
- Final Regulation with Notice of Proposed Rulemaking Omitted
- 120-day Emergency Certification of the Attorney General
- 120-day Emergency Certification of the Governor
- Delivery of Tolled Regulation
 - a. With Revisions
 - b. Without Revisions

RECEIVED
 2003 AUG - 6 PM 2:55
 INDEPENDENT REGULATORY
 REVIEW COMMISSION

FILING OF REGULATION

DATE	SIGNATURE	DESIGNATION
8/10	<i>Quale</i> <i>Reddick</i>	HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
8-6-03	<i>Don A. Castle</i>	SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
8-10-03	<i>Elena Pagan</i>	INDEPENDENT REGULATORY REVIEW COMMISSION
_____	_____	ATTORNEY GENERAL (for Final Omitted only)
_____	_____	LEGISLATIVE REFERENCE BUREAU (for Proposed only)