ILLINOIS POLLUTION CONTROL BOARD
April 20, 1995

IN THE MATTER OF:	)	
	)	
15% ROP PLAN CONTROL MEASURES FOR VOM EMISSIONS-PART IV: TIGHTENING SURFACE COATING STANDARDS; SURFACE COATING OF AUTOMOTIVE\TRANSPORTATION AND BUSINESS MACHINE PLASTIC PARTS; WOOD FURNITURE COATING; REACTOR PROCESSES AND DISTILLATION OPERATION PROCESSES IN SOCMI; AND BAKERY OVENS; AMENDMENTS TO 35 ILL. ADM. CODE PARTS 211, 218 AND 219	)	R94-21 (Rulemaking)

Adopted Rule. Final Order.

OPINION AND ORDER OF THE BOARD (by G. T. Girard):[1]

On September 12, 1994, the Illinois Environmental Protection Agency (Agency) filed this proposal for rulemaking. Section 182(b)(1) of the Clean Air Act (CAA), as amended in 1990, requires all moderate and above ozone nonattainment areas to achieve a 15% reduction of 1990 emissions of volatile organic material (VOM) by 1996. In Illinois, the Chicago and Metro-East St. Louis (Metro-East) areas are classified as "severe" and "moderate" nonattainment for ozone, respectively, and as such are subject to the 15% reduction requirement. Also pursuant to Section 182(b) of the CAA, Illinois is to submit a 15% Rate of Progress Plan (ROP) within three years of the enactment of the CAA amendments. This rulemaking represents Part IV of the rules proposed in Illinois' 15% ROP plan.[2]

The Board's responsibility in this matter arises from the Environmental Protection Act (Act) (415 ILCS 5/1 et seq. (1992)). The Board is charged therein to "determine, define and implement the environmental control standards applicable in the State of Illinois" (415 ILCS 5/5(b)). More generally, the Board's

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[1] The Board wishes to acknowledge the contributions of attorney Marie Tipsord in this matter.

[2] See R94-12, In the Matter of 15 % ROP Plan Control Measures for VOM Emissions - Part I, R94-15, In the Matter of 15 % ROP Plan Control Measures for VOM Emissions - Part II, and R94-16, In the Matter of 15 % ROP Plan Control Measures for VOM Emissions - Part III.

rulemaking charge is based on the system of checks and balances integral to Illinois environmental governance: the Board bears responsibility for the rulemaking and principal adjudicatory functions; the Agency has primary responsibility for administration of the Act and the Board's regulations. The latter includes administration of today's new regulation.

The proposal includes several measures for reduction of VOM in various coating operations. Specifically, lower limits for VOM content of coatings applied to the following categories are proposed: can, paper, coil, fabric, vinyl, metal furniture coatings, baked large appliance coatings and miscellaneous parts and products. The proposal also includes amendments requiring automotive\transportation and business machine plastic parts coating sources to meet specific pound per gallon VOM limitations for coating operations which exceed the applicability threshold set forth in the rule or which emit more than 15 pounds per day of VOM. Finally, the proposal tightens the applicability levels (from 100 tons per year to 25 tons per year) for wood furniture coating operations.

The proposal also includes provisions regulating synthetic organic chemical manufacturing industry (SOCMI) distillation and reactor processes and bakery oven VOM emissions. SOCMI processes regulated by this proposal will be required to apply control technology to certain process vents which demonstrates 98% reduction of VOM emissions or reduces VOM to 20 parts per million by volume on a dry basis corrected to 3% oxygen.

This proposal was filed pursuant to Section 28.5 of the Act and was accepted for hearing. Pursuant to the provisions of that section the Board is required to proceed within set time-frames toward the adoption of this regulation. The Board has no discretion to adjust these time-frames under any circumstances. Today the Board acts to adopt this proposal and file it for final notice.

PROCEDURAL HISTORY

On September 15, 1994, the Board sent this proposal to first notice under the APA without commenting on the merits of the proposal. The proposal was published in the Illinois Register on October 14, 1994 at 18 Ill. Reg. 15192 (Part 211), 18 Ill. Reg. 15211 (Part 218), and 18 Ill. Reg. 15274 (Part 219). Hearings were held on November 4, 1994, December 2, 1994 and December 16, 1994, in Chicago, Illinois before hearing officer Marie Tipsord.

The comment period closed on January 4, 1995 and the Board received 16[3] comments which are discussed in detail below.

On January 26, 1995, the Board adopted the proposal for Second Notice with several changes which are discussed herein.

PROPOSAL

Section 182(b)(1) of the CAA, as amended in 1990, requires all moderate and above ozone nonattainment areas to achieve a 15% reduction of 1990 emissions of VOM by 1996. This rulemaking is Phase 4 of Illinois' 15% ROP plan to achieve that reduction. The proposal represents a group of measures which are presented to reduce VOM emissions in the Metro-East area (moderate nonattainment) and the Chicago area (severe nonattainment).

As discussed above, the proposal includes four processes to be controlled. Those four types are:

1. Coating of Automotive/Transportation and Business Machine Plastic Parts
2. Wood Furniture Coating
3. Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation and Reactor Processes
4. Bakery Ovens (Prop. at 5-8)[4]

In addition, the Agency has proposed minor Reasonably Available Control Technology (RACT) revisions in this proceeding. (Prop. at 8.)

Coating Operations

The proposal would tighten the existing VOM content limitations for over 300 potentially affected sources, the majority of which are in the Chicago area. (Prop. at 5-6.) The categories of coatings which are affected by the proposal include "can, paper, coil, fabric, vinyl, metal furniture, baked large appliances and miscellaneous metal parts and products". (Prop. at 6.) The Agency expects the proposed control measures to

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[3] The Board notes that on March 15, 1994 a comment entered into the record as "P.C. 17" was filed by Solar Corporation. The Board is unable to consider the comment in this proceeding as the record closed by statute (Section 28.5(l) on January 4, 1995.

[4] The statement of reasons filed by the Agency will be cited as "Prop. at ___"; public comments will be cited as "P.C. __ at ___"; the transcript will be cited as "Tr. at __"; prefiled testimony will be cited as "Exh. _ at __"; and attachments to the Agency's proposal will be cited as "Attach. __ at __".

reduce the VOM emissions in the Chicago area by 10.16 tons per day (TPD) and 0.39 TPD in the Metro-East area.

The proposal also adds a new method for compliance known as cross-line averaging. (Prop. at 6.) Cross-line averaging will allow a source to demonstrate, using mathematical equations, that the aggregate of all emissions from all coating lines is less than the daily allowable VOM emissions from the same group of lines. (Prop. at 10.)

With regard to the technical feasibility and economic reasonableness of the proposal, the Agency contracted for the services of Science Application International Corporation (SAIC), an engineering consulting firm, to assess the technical feasibility and economic reasonableness of the proposed amendments to the VOM content limitations for coatings. (Prop. at 17.) SAIC found that the existing coating standards were being met by sources through the use of coatings which had a VOM content that was only 77 percent of the current allowable VOM limit. *(Id.)* The Agency also notes that the technical feasibility of the proposed amended VOM content limitations for coatings is also being demonstrated by sources subject to the VOM content limitations in California's South Coast Air Quality Management District ("South Coast"). (See: South Coast Air Quality Management District, Rules and Regulations, Tit. IX, §1107 (1992); Attach. 17(b)(10).)

The general cost effectiveness of alternative control options under this proposal vary depending on the size of the source. (Prop. at 17-18.) For control by means of waterborne coatings, SAIC estimates that costs range from $310 to $680 per ton of VOM reduced and for high solids coatings, SAIC estimates that costs range from $650 to $1,560 per ton of VOM reduced. (Prop. at 18.) Finally, for add-on controls, SAIC estimates that costs range from $3,450 to $12,570 per ton of VOM reduced. *(Id.)*

Coating of Automotive/Transportation and Business Machine Plastic Parts

The proposal amends the coating requirements applicable to seven potentially affected sources, all in the Chicago area, with coating operations for interior and exterior plastic parts for automotive or other transportation equipment. Such equipment includes trucks (light-, medium-, or heavy-duty); construction equipment; vans; buses; tractors; lawnmowers and other mobile equipment intended for primary use on land; and housing and exterior plastic parts for business and commercial machines, including, but not limited to, computers, monitors, printers, facsimile machines, microfiche readers, copy machines, cellular and standard phones, typewriters, pencil sharpeners, medical equipment, and entertainment equipment. (Prop. at 6.) This proposal excludes coating operations for plastic parts coated on

the main (body) paint line in automobile and light duty truck assembly plants; coating operations for plastic parts coated during refinishing of automobile, trucks, tractors, lawnmowers and other mobile equipment; watercraft and aircraft; and internal electrical components of business machines. (Prop. at 6.)

These control measures are expected to reduce 1996 VOM emissions by 0.28 TPD in Chicago, according to the Agency. (Prop. at 11.) The cost-effectiveness of lower VOM content coatings for Automotive/Transportation plastic parts are $606-668 per ton of VOM reduced and the cost-effectiveness of lower VOM content coatings for Business Machine plastic parts are $470-480 per ton of VOM reduced. (Prop. at 18.) Add-on thermal incineration systems are an option that can be used to control VOM emissions instead of lower VOM content surface coatings and the costs vary depending on the plant size and volume of coating required. *(Id.)*

Wood Furniture Coating

This proposal includes amendments which will potentially affect 19 facilities which have wood coating operations, all in the Chicago area. (Prop. at 7.) Specifically, the Agency is proposing to modify the applicability section to lower the threshold from 100 tons per year of maximum theoretical emissions to 25 tons per year potential to emit. (Prop. at 7.) In effect, then, the proposal is tightening the applicability of the wood coating provisions; however, the Agency does not believe that the proposed amendments will reduce VOM emissions. (Prop. at 12.) Rather, the Agency believes this provision is important to insure that no increase in VOM emissions occurs. (Prop. at 12.)

The technology for controlling VOM emissions from wood furniture coating operations through add-on controls is available, and includes thermal or catalytic incinerators and adsorption devices. (Prop. at 19.) The cost estimates below represent sources that emit from 50 TPY to 500 TPY of VOM. *(Id.)* The capital costs for control devices range from $446,400 to $8,115,600 while the operating costs for catalytic incinerators range from $170,700 to $3,439,500 annually. *(Id.)* These costs are based on a scheme where a single control device controls all VOM emissions from the source. *(Id.)* An enclosure over the entire finishing line may be required for most wood furniture coating sources to use a single control device with a capital cost of range from $10,000 to $100,000, depending on the size of the facility. (Prop. at 19-20.)

SOCMI

The Agency has identified 2 sources which are potentially affected by these proposed amendments. One facility is in the Chicago area and the second is in the Metro-East area.

Specifically, the proposal would apply to facilities that have continuous chemical manufacturing process units that produce as a primary product chemicals set forth in Appendix A of Parts 218 and 219. (Prop. at 7.)

Excluded from the applicability of this proposal are: (1) reactor processes or distillation operations that are designed and operated in batch mode; (2) reactor processes or distillation operations that are part of a polymer manufacturing operation; (3) reactor processes or distillation operations in a process unit with a total design capacity of less than 1,100 tons per year for all chemicals produced within that unit; (4) any vent stream with a flow rate less than 0.0085 scm/min or total VOM concentration of less than 500 ppmv; or (5) any reactor or distillation unit included within an Early Reduction Program approved by USEPA. (Prop. at 12.) Under the proposal, applicability for all non-exempt process vents will be determined by a total resource effectiveness ("TRE") index calculation. A TRE index value of 1.0 or less subjects that process vent to the control requirements in this rulemaking. *(Id.)*

The control requirements of this proposal recommend a presumptive norm for RACT of 98 percent reduction of VOM emissions or 20 ppmv, on a dry basis, corrected to 3 percent oxygen, emission limit for affected vent stream(s). (Prop. at 12-13.) No vent stream with an existing combustion device is required to meet the 98 percent reduction requirement or 20 ppmv emission limit until the combustion device is replaced. (Prop. at 13.)

This proposal is based on USEPA's control technology guideline (CTG) for controlling VOM process vent emissions from SOCMI reactor processes and distillation operation, which was formally announced on November 15, 1993. (See 58 FR 60197, November 15, 1993; Prop. at 13.) According to the Agency, this measure is not expected to reduce VOM emissions in either the Chicago or the Metro-East nonattainment area; rather, this measure is proposed in accordance with the State's obligation to adopt regulations implementing RACT, as promulgated by USEPA under Section 182(b)(2)(A) of the CAA. (Prop. at 13.)

Combustion is the primary control method used for VOM emissions reduction for these processes. Control options include, but are not limited to, boilers, flares, afterburners, or recovery. USEPA estimates indicate that the cost effectiveness of controlling VOM emissions from SOCMI distillation and reactor processes ranges from $241 to $21,000 per ton of VOM reduced. (Prop. at 20.) The highest cost effectiveness is for low-flow and low-heat value sources processing halogenated hydrocarbons. An analysis prepared by the State and Territorial Air Pollution Program Administrators and Association of Local Air Pollution Control Officials

(STAPPA/ALAPCO) indicates that the corresponding maximum cost of control, for CTG exempt sources with a TRE index greater than 1.0, is approximately $2,300 per ton. *(Id.)*

Bakery Ovens

The proposal regulates bakery ovens for the first time. Bakery ovens are defined as ovens which bake yeast-leavened bread products. The source must have a potential to emit 25 tons per year before it is subject to the requirements. However, the proposal excludes ovens which are used to bake for on-site consumption or on-site retail sale. (Prop. at 13.)

The proposal requires emission controls that achieve an overall efficiency of 81% reduction in VOM from bakery ovens. (Prop. at 13.) This level includes VOM emissions from all emission units at the source. (*Id.*) Sources with VOM emissions limits below the applicability threshold of 25 tons per year are required by this proposal to maintain records to establish their annual emissions level and to certify that they are exempt from the control requirements. (Prop. at 13-14.)

The proposal states:

> Afterburners, such as catalytic oxidizers or regenerative oxidizers, are the most effective devices for controlling VOM emissions from bakery ovens. Catalytic oxidizers have been used successfully at numerous bakeries in other states. The costs vary depending on the age and size of the oven, and the number of exhaust streams that must be routed to the control device. Capital costs range from $84,000 to $205,000 for catalytic oxidizers and from $197,000 to $295,000 for regenerative oxidizers. Annual operating costs range from $36,000 to $72,000 for catalytic oxidizers and from $72,000 to $115,000 for regenerative oxidizers. (See: Item 16(e) of the Table of Contents.) (Prop. at 20-21.)

Minor RACT Amendments to Parts 218 and 219

The proposal amends Sections 219.926, 219.946, 219.966 and 219.986 dealing with permitting issues that have the potential to affect many facilities. (Prop. at 8.) Specifically, the proposal adds the word "equivalent" to these sections before any reference to an alternative control plan. The proposal also amends Section 218.980 and 219.980 to add polyethylene foam packaging as a category of packaging not subject to the control requirements in Sections 218.986 and 219.986. The proposal also corrects a list of criteria by which a source determines if it is able to fill aerosol cans by the "through-the-valve" method, making it clear that satisfaction of any single criterion would not require a source to fill aerosol cans through this method, and the source may use another filling method. *(Id.)* The

amendment to Section 218.966(c) adds the inadvertently omitted compliance date of March 15, 1995, to that subsection, and affects non-SOCMI sources (i.e. miscellaneous organic chemical manufacturing processes) with leaks in the Chicago ozone nonattainment. *(Id.)*

The amendments to Section 218.106(e) affect coating operations on electromotive diesels in Cook County, Illinois setting forth the date for compliance with the VOM content limits for coatings applied in this category, consistent with USEPA's settlement in the litigation concerning the Federal Implementation Plan (See 55 FR 26814, June 29, 1990.)

The Agency has not identified any potential sources in the Metro-East area and so anticipates no reduction in VOM emissions for that area. In the Chicago area, the Agency expects the control of VOM emissions will result in a 0.98 TPD reduction in the Chicago area.

TESTIMONY AND COMMENTS

As stated previously, the Board received 16 public comments on this rulemaking. Comments were received from the following:

1. Linda Brand, Manager of Regulatory Flexibility Unit, Illinois Department of Commerce and Community Affair

2. Dietzgen Corporation submitted by Beth A. Caylor, Environmental Affairs Manager

3. Connie Bradway, Administrative Code Division, Secretary of State

4. Interstate Brands Corporation submitted by Robert E. Stine

5. V. J. Dolan & Co. by Stepen J. Dolan

6. City of Chicago by Henry L. Henderson, Commissioner, Department of Environment

7. USEPA by Stephen Rothblatt, Chief, Regulation Development Branch

8. American Bakers Association submitted by Anne G. Giesecke, Ph.D.

9. Interstate Brands Corporation submitted by Robert E. Stine, Attorney

10. Kraft General Foods submitted by Peggy L. Martin, Director, State Government Affairs and Deborah A. Becker, Vice President, Environmental Policy

11. Harris Marcus Group by Jeffrey C. Fort

12. Stepan Company submitted by Patricia F. Sharkey

13. Illinois Environmental Regulatory Group submitted by Whitney Wagner Rosen

14. Outboard Marine Corporation submitted by Maribeth Flowers

15. S & C Electric Company submitted by Kathleen Hodge

16. Agency comments submitted by Bonnie Sawyer, Shelia Kolbe and Kyle Davis, Assistant Counsels, Legal Division

In addition, several individuals testified at the Board's December 2, 1994, hearing including:

Deborah Becker for Kraft General Foods;

Dr. Anne Giesecke for American Bakers Association;

Mark Biel for Chemical Industry Council;

Gordon Nelson for Harris Marcus Group;

Greg Miller for Solar Corporation;

Elizabeth Steinhour for Illinois Environmental Regulatory Group;

Robert Sullivan for S & C Electric.

The discussion that follows will be organized by subject matter and where possible by the public comment number. We will begin by discussing the testimony received at the December 2, 1994 hearing which was not followed by a public comment. We will then discuss the comments received.

PAINT AND COATING INDUSTRY MANUFACTURERS

Chemical Industry Council

Mr. Mark Biel testified on behalf of the Chemical Industry Council (Council) at the Board's December 2, 1994, hearing. Mr. Biel testified that implementation of a portion of these rules would have a "dramatically negative effect on the paint and

coating industry manufacturers and, more importantly, their customers and be at odds with state and federal requirements relating to establishing VOM emission control technologies for existing surface coating processes." (Exh. 20 at 1-2.) Specifically Mr. Biel made the following points:

1. The Agency's reliance upon southern California's coating industry and coating regulations as a technical basis for emission limits set forth in this proposal is inappropriate because the feasibility of applying lower VOM coatings that comply in southern California is heavily dependent upon the existence of drier and warmer weather conditions. Also the emission limits set forth in the southern California regulations go beyond RACT and, in fact, rely upon future advanced technology which is not currently available.

2. Certain emission limits set forth in the Agency's proposal are technology forcing, and, therefore, go beyond the RACT threshold allowed by the CAA to meet the 15% ROP plan control measures for VOM emissions in non-extreme areas of the country.

3. The 2.2 lbs./gal. emission limit set forth in Subpart F, Section 218.204(b)(1) of the proposal cannot be met by certain manufacturers of sheet basecoat and overvarnish for can coating using current technology.

4. The 1.7 lbs./gal. emission limit set forth in Subpart F, Section 218.204(d) of the proposal goes well beyond RACT and may be economically and technologically infeasible with current add-on control technologies.

5. The 2.3 lbs./gal. emission limit set forth in Subpart F, Section 218.204(g)(2) of the proposal for baked coatings applied to metal furniture will cause substantial reductions in the quality and performance of these coatings which will make them unusable for many applications in this category.

6. The 3.0 lbs./gal. emission limit set forth in Subpart F, Section 218.204(j)(2)(B) of the proposal for baked extreme performance coatings applied to miscellaneous metal parts and products will extremely limit applicability of these coatings due to reductions in viscosity, non-uniform film thickness and curing problems. Reductions in spread rates of these coatings at the proposed VOM levels would also likely decrease productivity tremendously.

7. The 2.8 lbs./gal. emission limit set forth in Subpart F, Section 218.204(j)(4)(A) of the proposal for air

dried coatings applied to miscellaneous metal parts and products cannot be met for the majority of applications with current technology. Reductions in spread rates of these coatings at the proposed VOM levels would also likely decrease productivity tremendously.

8. The 2.3 lbs/gal. emission limit set forth in Subpart F, Section 218.204(j)(4)(B) of the proposal for baked coatings applied to miscellaneous metal parts and products cannot be met with current technology. Reductions in spread rates of these coatings at the proposed VOM levels would also likely decrease productivity tremendously.

Agency Response to Council

The Agency and the Council have reached agreement on proposed changes to the rulemaking and are recommending those changes to the Board. (P.C. 16 at 4.) Specifically, changes are being recommended for Sections 218/219.204(j)(2) and 218/219.204(j)(4), new subsections 218.204(j)(6) and (7), and 219.204(j)(5) and (j)(6). (P.C. 16 at 4.) The recommendation for change would raise the VOM emission limit for extreme performance coatings from 3.0 lb/gal as proposed to 3.3 lb/gal. All other air dried coatings will also have a limit of 3.3 lb/gal and baked coatings will be limited to 2.8 lb/gal rather than 2.3 lb/gal. (*Id.*) The Agency also recommends adding a definition for "Metallic Coating" with limits for this category at 3.5 lb/gal for air dried and 3.0 lb/gal for baked coatings. (*Id.*)

Board Action

The Board accepts the recommendations for amendments as proposed by the Council and the Agency. Sections 218/219.204(j)(2) and 218/219.204(j)(4) new subsections 218.204(j)(6) and (7) and 219.204(j)(5) and (j)(6) will be amended to read as follows:

Section 218.204

j)	Miscellaneous Metal Parts and Products Coating		
	1) Clear coating	0.52 0.52*	(4.3) (4.3)*
	~~2) Air-dried coating~~	~~0.42~~	~~(3.5)~~
	~~3~~2) Extreme performance coating	~~0.42~~	~~(3.5)~~
	A) Air dried	0.42	(3.5)

		0.42*	(3.5)*
	B) Baked	0.42	(3.5)
		0.40*	(3.3)*
~~4~~3)	Steel pail and drum interior coating	0.52	(4.3)
		0.52*	(4.3)*
~~5~~4)	All other coatings	~~0.36~~	~~(3.0)~~
	A) Air Dried	0.42	(3.5)
		0.40*	(3.3)*
	B) Baked	0.36	(3.0)
		0.34*	(2.8)*
6)	Metallic coating		
	A) Air Dried	0.42	(3.5)
		0.42*	(3.5)*
	B) Baked	0.36	(3.0)
		0.36	(3.0)*

7) Definitions

A) For purposes of subsection 218.204(j)(5) of this Section, the following terms are defined:

i) "Corrosion resistant basecoat" means, for purposes of subsection 218.204(j)(5)(B)(ii) of this Section, a water-borne epoxy coating applied via an electrodeposition process to a metal surface prior to spray coating, for the purpose of enhancing corrosion resistance.

ii) "Electrodeposition process" means for the purposes of subsection 218.204(j)(5) of this Section, a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created.

iii) "Marine engine coating" means, for purposes of subsection 218.204(j)(5) of this Section, any extreme performance protective, decorative or functional

coating applied to an engine that is used to propel watercraft.

B) For purposes of subsection 218.204(j)(6) of this Section, "metallic coating" means a coating which contains more than 1/4 lb/gal of metal particles, as applied.

Section 219.204

j) Miscellaneous Metal Parts and Products Coating

~~3~~2)	Extreme performance coating	~~0.42~~	~~(3.5)~~
	A) Air dried	0.42 0.42*	(3.5) (3.5)*
	B) Baked	0.42 0.40*	(3.5) (3.3)*
~~5~~4)	All other coatings	~~0.36~~	~~(3.0)~~
	A) Air Dried	0.42 0.40*	(3.5) (3.3)*
	B) Baked	0.36 0.34*	(3.0) (2.8)*
5)	Metallic coating		
	A) Air Dried	0.42 0.42*	(3.5) (3.5)*
	B) Baked	0.36 0.36*	(3.0) (3.0)*

6) For purposes of subsection 219.204(j)(5) of this Section, "metallic coating" means a coating which contains more than 1/4 lb/gal of metal particles, as applied.

SOLAR CORPORATION

Mr. Greg Miller testified on behalf of the Solar Corporation at the Board's December 2, 1994 hearing. Mr. Miller explained that Solar is a "job shop" making custom-made, painted- and fabric- covered plastic decorative components for original equipment manufacturers of home entertainment and automotive industries. (Exh. 27 at 1.) Solar does not specify the types of coating applied to its product lines, according to Mr. Miller.

(*Id.*) Further, due to the nature of the products manufactured, there are wide swings in production and overlapping business cycles which make record keeping and production planning difficult. (*Id.*)

Mr. Miller testified that Solar, which is located in Libertyville, Illinois, anticipates that all its coatings, with the exception of two, will comply with the proposed VOM limitations. (Exh. 27 at 2.) Those two exceptions are an adhesion primer used to coat automotive plastic parts made from polyolefinic, polyvinyl chloride or polyamide-based plastics and a metal flake coating. (*Id.*)

Solar has been in contact with the Agency to discuss alternatives and was provided with a copy of the Alternative Control Techniques Guidance Document which formed the basis for the proposed emission limits. (Exh. 27 at 4.) Mr. Miller states:

> While that document does indicate that there are compliant adhesion primers for use with sheet molded plastics, those plastics are physically and chemically different than the plastics Solar applies adhesion primers to prior to painting. Solar uses, among others, high impact styrenes, polycarbonates, ABS, Noryl and polyamides. As different plastics have different physical compositions, so do they also have different chemical compositions. Different reactions, therefore, will occur between different plastics and the solvents in different coatings. Consequently, it does not follow that simply because one adhesion primer formulated for one plastic will react in the same way with another plastic. [sic]

(Exh. 27 at 4.)

Mr. Miller asks that the Board consider amending the proposal to include a specific category and limit for adhesion primers used to coat automotive plastic parts made from polyolefinic, polyvinyl chloride or polyamide-based plastic parts. (Exh. 27 at 5.) Mr. Miller asserts that since USEPA "apparently did not consider the use of adhesion primers to coat polyolefinic, polyvinyl chloride or polyamide-based plastic parts" the request for amendment to the Board is warranted. (*Id.*) Solar suggests the following language to be added to Sections 218/219.204:

		kg/l	lb/gal
n)	Plastic Parts Coating: Automotive/Transportation		
	***		
3)	Specialty		

F)	Adhesion primers used to coat polyolefinic, polyvinyl chloride or polyamide plastic parts	.85*	(7.1)*
G)	Metal flake coat	.79*	(6.5)*

(Id.)

Agency Response to Solar

The Agency in its final comments indicated that after the December 2, 1994, hearing in this proceeding, the Agency contacted USEPA regarding the issues raised by Solar. According to the Agency, USEPA does not believe that the information provided by Solar at the second hearing supports the need for separate categories for these types of coatings. (P.C. 16 at 23.) "USEPA believes that compliant coatings are available." (*Id.*) The Agency contacted several manufacturers of paints and coatings all of which stated that there are adhesion primers available which meet the proposed levels. (*Id.*)

Board Action

The Board will not adopt the changes suggested by Solar at this time. The Board notes that the Agency does not fully address several of the concerns raised by Solar. In fact, the Agency has reiterated the economic and technical support for the proposal without addressing the specifics of Solar's operation. However, Solar also fails to give sufficient technical and economic support for a general rulemaking change. Solar might wish to examine the possibility of a site-specific rulemaking or adjusted standard for its facility on this issue.

CAN COATING OPERATIONS

Agency Response to Comments of United States Can Company

The Agency indicated that, in response to questions presented at the November 4, 1994, hearing, the Agency reexamined the proposed limits for overvarnish coatings used in three-piece can coating operations. (P.C. 16 at 8.) After reviewing the limit, the Agency recommends that the proposal be amended to retain the current limit for overvarnish while lowering the basecoat limits. (P.C. 16 at 8-9.)

Board Action

The Board will accept the recommendation and amend the proposal at Sections 218.204(b)(1) and 219.204(b)(1) to read:

Section 218/219.204 Emission Limitations

		kg/l	lb/gal
b)	Can Coating		
1)	Sheet basecoat and overvarnish	~~0.34~~	~~(2.8)~~
	A) Sheet basecoat	0.34 0.26*	(2.8) (2.2)*
	B) Overvarnish	0.34 0.34	(2.8) (2.8)*

GENERAL PUBLIC COMMENTS

DCCA (P.C. 1) and Secretary of State (P.C. 3)

The first comment was filed by the Illinois Department of Commerce and Community Affairs which indicated that the rule would not significantly impact small business. (P.C. 1.) A comment was also received from the Secretary of State Administrative Code Division which indicated minor changes necessary for codification purposes. (P.C. 3.) Those changes have been made in the proposed second notice.

Dietzgen Corporation (P.C. 2)

Dietzgen Corporation's comment centers around the use of USEPA test Method 24 for determining the VOM content of water-based paper coating formulas used by Dietzgen. (P.C. 2 at 1.) Dietzgen is concerned that the Method 24 analysis is inaccurate and that use of Method 24 will not give a correct VOM level. Dietzgen indicates that it will continue to seek alternatives and welcome suggestions on the approach it has taken. (*Id.*)

V. J. Dolan & Co., Inc. (P.C. 5)

V. J. Dolan & Co. comments that, as a coatings manufacturer, the proposed limits set forth for "'Miscellaneous Metal Parts & Products Coating' are not feasible for a large number of coating users in the Greater Chicago area." (P.C. 5.) The comment "strongly" urges the Board to reconsider these limits and allow for limits which are "both realistic and achievable". (*Id.*)

Henry L. Henderson, Commissioner, Chicago Department of Environment (CDOE) (P.C. 6)

Mr. Henderson states that "CDOE supports the goals of this rulemaking and urges the State to allow implementation in the most flexible and cost effective manner as possible." (P. C. 6 at 2.) Specifically, CDOE supports interfacility trading and seasonality components which would allow flexibility to meet the lower VOM emissions requirements. (*Id.*) CDOE also supports the use of cross-line averaging. (*Id.*)

Agency Response to Dietzgen Corporation, Dolan and CDOE

The Agency did not specifically respond to each of these comments. However, the Agency's comments in general do address the issues raised by the above mentioned commentors.

Board Action

No formal Board action is necessary to address these concerns.

BAKERY OVENS

United States Environmental Protection Agency (USEPA) (P.C. 7)

The USEPA provided specific comment on the proposal for bakery ovens. The USEPA has issued an "Alternative Control Technique (ACT)" for bakery oven emissions. (P.C. 7.) The USEPA indicates:

> The ACT states that control efficiencies on ovens of 95 percent could be achieved at a reasonable cost using catalytic oxidation. The USEPA is aware that in some States bakeries have achieved reductions of 90 percent or more and have not reported any problems in instituting a level of control to achieve this. Based in part on this information, the USEPA believes that reasonably available control of VOM emission from bakery ovens is from 80 percent to 95 percent. Illinois' proposed regulations which require 81 percent control of VOM emissions from bakery ovens reflects USEPA's intent. (P.C. 7.)

Interstate Brands Corporation (Interstate) (P.C. 4 and 9)

Interstate Brands Corporation supported the comments made by the American Bakers Association (described below) and also initially commented that it urges:

> an option be included to allow facilities to have a choice to either control the total non-exempt emission units to the percent reduction specified in the regulation or control all non-exempt emission units to below 25 tons per year in actual emissions as an alternative to the percent of control level suggested. (P.C. 4 at 1.)

Additionally, Interstate Brands Corporation asked that the applicability section be more clearly worded and noted that the recordkeeping requirements as proposed were unduly burdensome. (*Id.*)

Interstate Brands Corporation states in its final comments that it urges an exemption of all ovens with less than 15 tons

per year of actual emissions in all baking facilities. (P.C. 9 at 1.) Interstate Brands Corporation also states that it no longer objects to the recordkeeping requirements after further explanation of the requirements by the Agency. (*Id.*)

American Bakers Association (P.C. 8)

Dr. Ann Giesecke testified at the December 2, 1994, hearing on behalf of the American Bakers Association (Association). In addition, several bakers from the Chicago area were present to show support for the Association's position as well as being available to answer questions. (Tr. at 136-140.) Dr. Giesecke testified that bakers would like to do their part to see the state reach the 15 percent goal; however, he asserted that the industry must also be able to maintain economic viability. (Tr. at 142-143.)

Dr. Giesecke points out that the bakery oven proposal is regulating the emissions of "ethanol, a non-toxic low reactive, natural by-product of yeast fermentation that was captured under the definition of VOM because of the oxygen molecule." (Tr. at 143.) Dr. Giesecke further states that "there is minimal public benefit and risk analysis benefit to eliminating ethanol emissions from the atmosphere." (*Id.*) Dr. Giesecke requests that the Chicago area have a 15 ton per year exemption rather than 10 ton per year. (*Id.*) The cost differential for the bakers in dollars per ton is "$8,000 per ton at the 15 ton level, $14,000 per ton at the 10 ton level". (Tr. at 143.)

The Association in its final comments again requests that the rule apply only to major sources, i.e. "sources with actual emissions of 25 tons per year of VOM in the Chicago area and sources with actual emissions of 100 tons per year in the St. Louis area." (P.C. 8 at 1.) The Association suggests the "definition of potential to emit be qualified to apply after control equipment has limited emissions." (P.C. 8 at 2.)

The Association also agrees with the exemption for low emitting ovens and suggests that a 60 percent reduction requirement is reasonable when actual emissions are less than 100 tons per year. (P.C. 8 at 2.)

Kraft General Foods (P.C. 10)

Deborah Becker testified on behalf of Kraft General Foods (Kraft) at the December 2, 1994, hearing. Ms. Becker testified concerning the control requirements and the emissions monitoring requirements. (Tr. at 126.) Specifically, Ms. Becker made four recommendations in the area of control requirements to help address cost-effectiveness. (Tr. at 125-129.) First, Ms. Becker recommends that an exemption be included for small emitting ovens with actual emissions of less than 15 tons per year. (Tr. at

127.) Next, Ms. Becker recommends implementation of the emission reduction requirement on a facility wide basis rather than on an oven-by-oven basis. (*Id.*) Thirdly, Ms. Becker suggests establishing a facility-wide reduction of VOM at a 60 percent level rather than 81 percent. (Tr. at 128.) Finally, Ms. Becker recommends providing for innovative use of technology which would encourage innovation in reducing emissions. (Tr. at 128-129.) Ms. Becker also testified that as an alternative to the continuous monitoring requirement, compliance be verified through calculation using the USEPA's formula contained the ACT document. (Tr. at 130; Attach. 25.)

Kraft's final comments reiterate the position that applicability of the VOM emission rates should be based on actual, rather than potential emissions, as well as the position that the reduction should be 60 percent facility-wide. Kraft states that it is "encouraged by the willingness of the state to address the need for flexibility for Illinois bakeries to meet the requirements of the regulation." (P.C. 10 at 1.) Kraft also indicates support for the exemption of ovens which emit less than 15 tons per year. (P.C. at 2.)

Agency Response to Bakeries

The Agency, in its final comments, has grouped its response to the bakeries and states that:

> The Agency believes that this proposal represents a reasonable balance between the concerns of this industry and Illinois' need to reduce VOM emission in the State's nonattainments. (P.C. 16 at 25.)

Specifically, the Agency has agreed to request that the Board amend the proposal to "extend the exemption to individual ovens with actual emissions of 15 TPY or less, provided that total emissions from all exempt ovens never exceed 25 TPY." (P.C. 16 at 28.) In addition the Agency recommends "allowing for an extended period of time for bakeries with emissions in the range of 25 to 100 TPY to comply with the proposed control requirements". (P.C. 16 at 31.) Finally, the Agency is recommending that the testing portion of the proposal be amended to allow sources additional time to submit requested test results to the Agency. (P.C. 16 at 33.)

The Agency, in response to comments regarding actual emissions versus potential to emit, noted that USEPA determines that a source is a major source based on the potential to emit rather than actual emissions. (P.C. 16 at 26.) A bakery may limit its potential to emit through permit conditions to avoid the applicability of the rule; however, any change in the definition of potential to emit or major source must come from USEPA. (P.C. 16 at 27.) The Agency also states that the

proposed rule allows flexibility to bakeries for alternative control as long as the overall emissions reduction goal is achieved. (P.C. 16 at 28.)

The Agency also responded to the comments requesting a 60 percent level of reduction versus 81 percent. The Agency stated that it was not convinced that a 60 percent facility-wide reduction approach would be advantageous to many bakeries and the Agency believes that 81 percent control is achievable and cost effective level of control. (P.C. 16 at 30.) In support of this position, the Agency points to the USEPA's comment (See P.C. 7). The Agency has recommended that some flexibility be allowed in this area and proposed a change in the rulemaking which was discussed above.

Board Action

The Board will accept the recommendation offered by the Agency for amendments to the proposal on emission limits for bakery ovens. The Board appreciates the extensive comments provided by the bakery industry; however, the remaining suggestions for change offered by industry are not supported by the record. The USEPA clearly agrees with the Agency that 81 percent control is viable and achievable. Further, many of the provisions questioned by the industry such as recordkeeping and monitoring have been further explained by the Agency, which should alleviate these concerns.

The Board will amend the rules relating to bakery ovens at second notice as follows:

Section 218/219.722 Control Requirements

b) An owner or operator of a source subject to the control requirements of this Subpart may elect to exempt from the control requirements in subsections (a)(1) or (a)(2) and (c)(1) or (c)(2) of this Section any bakery oven with actual VOM emissions less than or equal to 15 TPY; provided that the total actual VOM emissions from all such exempt bakery ovens never exceeds 25 TPY.

c) Notwithstanding the requirements in subsection (a) of this Section, until March 15, 1998 only, a source may elect to comply with the control requirements in subsection (c)(1) or (c)(2) of this Section, rather than the control requirements in subsection (a)(1) or (a)(2) of this Section, if all emission units at the source, in the aggregate, excluding emission units regulated by Subparts B, E, F, H (excluding Section 218.405 of this Subpart), O, R, S, T (excluding Section 218.486 of this Subpart), V, X, Y, Z or BB of this Subpart, have maximum theoretical emissions of less

than 90.7 Mg (100 tons) of VOM per year or are limited to less than 90.7 Mg (100 tons) of VOM emissions per calendar year in the absence of air pollution control equipment through production or capacity limitations contained in federally enforceable permit conditions or in a SIP revision;

1) Operate emissions capture and control equipment which achieves an overall reduction in uncontrolled VOM emissions of at least 60 percent from each bakery oven with a rated heat input capacity of at least 2 mmbtu/hr or at least 586 KW; or

2) Provide an equivalent alternative control plan for such bakery ovens at the source which has been approved by the Agency and USEPA through federally enforceable permit conditions or as a SIP revision.

d) Any bakery oven that becomes subject to the requirements of this Subpart at any time shall remain subject to the requirements of this Subpart at all times thereafter.

Section 218/219.728 Recordkeeping and Reporting

c) Every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart because of the criteria specified in Section 218.722(b) of this Subpart shall:

1) Maintain records necessary to demonstrate that the actual VOM emissions from exempt bakery ovens are less than or equal to 15 TPY for each bakery oven and less than or equal to 25 TPY from all exempt bakery ovens combined. Such records shall be maintained for the most recent consecutive 3 year period and shall be made available to the Agency immediately upon request; and

2) Notify the Agency in writing if the actual VOM emissions from an exempt bakery oven ever exceed 15 TPY or the actual VOM emissions from a combination of exempt bakery ovens ever exceeds 25 TPY, within 30 days after the exceedance occurs. Such notice shall include a copy of all records of the exceedance.

d) Every owner or operator of a bakery oven which is controlling emissions as provided in Section 218.722(c) of this Subpart until March 15, 1998, shall maintain

records necessary to demonstrate that its maximum theoretical emissions as specified in Section 218.722(c) are less than 90.7 Mg (100 tons) of VOM per year. Such records shall be maintained for the most recent consecutive 3 year period and shall be made available to the Agency immediately upon request.

Section 218/219.730 Certification

e) On or before March 15, 1996, or upon initial startup, every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart because of the criteria specified in Section 218.722(b) of this Subpart shall certify that actual VOM emissions from any individual exempt bakery oven never exceed 15 TPY and that VOM emissions from all exempt bakery ovens, in the aggregate, never exceed 25 TPY.

f) On or before March 15, 1996, or upon initial startup if prior to March 15, 1998, every owner or operator of a bakery oven which is controlling emissions as provided by Section 218.722(c) of this Subpart, shall certify that its maximum theoretical emissions as specified in Section 218.722(c) are less than 90.7 Mg (100 tons) of VOM per year.

WOOD FURNITURE COATINGS

Harris Marcus Group (P.C. 11)

Mr. Gordon Nelson testified on behalf of the Harris Marcus Group (Harris Marcus) at the Board's December 2, 1994, hearing. (Exh. 22.) Mr. Nelson indicated that he is Vice President of Operations for Harris Marcus, which has a facility located at 3757 South Ashland in Chicago. (Exh. 22 at 1.) Harris Marcus is a specialty manufacturer of portable lighting and promotional furniture, originally founded in 1971. (Exh. 22 at 2.) Harris Marcus employs approximately 500 people and produces 95% of its product in Chicago. (*Id.*) The Harris Marcus facility is a custom, made-to-order operation with over 15,000 finished goods and end items with small quantity typical production runs of 12 to 36. (Exh. 22 at 2-3.) In these processes, use of a variety of coatings is necessary. In 1993 the facility used 40 different wood coatings and 140 different coatings on its metal products. (Exh. 22 at 3-4.)

Mr. Nelson testified that the estimated emissions of VOMs from the facility in 1994 is "fifty-four (54) tons per year, thirty-two tons of which are attributable to wood furniture coating operations, fourteen (14) tons to metal coating operations, and eight (8) tons to other substrates." (Exh. 22 at

4.) Mr. Nelson testified that Harris Marcus will be adversely affected by the changes proposed in this rulemaking lowering the threshold of applicability in wood furniture coatings from 100 tons per year to 25 tons per year, and the lowering of the VOM content applicable to the metal coating operations at the Harris Marcus facility. (Exh. 22 at 5.)

Mr. Nelson testified that the Harris Marcus facility will "be unable to meet the limitations of the proposed rules without either severe restriction in its production or monetary burden." (Exh. at 5.) Mr. Nelson's testimony indicates that the Harris Marcus' suppliers of wood and metal coatings have only recently began to offer low VOM-content and water-based coatings. (*Id.*) Mr. Nelson states that the some of these coatings "while meeting the VOM limitations of the regulations, do not produce a saleable product". (Exh. 22 at 5-6.) Mr. Nelson further indicated that the cost of add-on control equipment is estimated at an annualized cost of VOM emissions control ranging between $15,000 and $30,000 per ton with a cost for wood coating at $25,000 to $50,000 per ton. (Exh. 22 at 6.)

In its final comment, Harris Marcus suggests four options which it is requesting the Board consider to mitigate the economic hardship the regulations as proposed will impose. (P.C. 11 at 3-7.) First, Harris Marcus suggests that the Board retain the 100 ton per year VOM applicability threshold for wood furniture coating. (P.C. 11 at 3.) Harris Marcus points out that the Agency testimony indicated that the Agency does not believe any wood furniture coating facilities in the Chicago area will be affected by the new applicability level. (P.C. 11 at 3, citing to Exh. 1 at 4 and Exh. 7 at 2.) Further, the Agency is "not required by USEPA to lower the applicability threshold for wood furniture coating" and USEPA has not issued a CTG for wood furniture coating. (P.C. 11 at 3.)

Harris Marcus argues that the inclusion of the provision lowering the wood furniture threshold is inappropriate as a part of the Section 28.5 process. (P.C. 11 at 4.) Harris Marcus maintains that Section 28.5 allows adoption of "a rule that the federal Clean Air Act Amendments (CAAA) requires to be adopted before December 31, 1996" and this proposal was initiated to fulfill requirements of Section 182(b)(1) of the CAAA relating to reasonable further progress. (*Id.*) Harris Marcus points out that the Agency "conceded that it has not relied upon lowered applicability threshold to meet its 15% ROP obligations because it has not expected any emission reductions from the proposed rule change." (*Id.*)

The second suggestion from Harris Marcus is that the proposal include an exemption for coatings used in small amounts. (P.C. 11 at 5.) Harris Marcus points to the agreement the Agency made to allow an exemption for touch-up and repair coatings to

support its proposal. (*Id.*) Harris Marcus maintains that there is no technical basis for limiting the exemption to touch-up and repair coatings, when the operations at facilities like Harris Marcus, where there are few if any production lines and coatings are applied manually, also seem to fit the description. (*Id.*)

Thirdly, Harris Marcus suggests that a separate category for custom wood furniture and lamp manufacturing be established in the proposed rule based on the language offered at hearing. (P.C. 11 at 6.) Finally, Harris Marcus suggests that use of emission reduction credits be recognized. (*Id.*)

Agency Response to Harris Marcus

The Agency reiterates, in its final comment, that the change for wood coating will lower the applicability threshold; however, the Agency is not changing the VOM content limits. (P.C. 16 at 15.) The Agency states that its proposal:

> is a necessary part of the State's 15% ROP Plan. If the applicability level for this category is not lowered back to the pre-FIP 25 TPY level, it is possible for emissions from this category to increase, creating a "backsliding" effect. Those increases would negatively impact the 15% ROP Plan and make it difficult to obtain the necessary reductions. (P.C. 16 at 16.)

The Agency concedes that there is no CTG for wood coatings at the present time, although USEPA anticipates publishing a CTG in 1995. (P.C. 16 at 17.) The Agency maintains that, even without the final CTG, Illinois is required to regulate sources above 25 tons per year because it is RACT. (*Id.*) Further, the Agency states that Harris Marcus is:

> the only source objecting to the proposed changes to the wood furniture coating regulations. All other wood furniture coating facilities identified by the Agency are either already complying with the limits, which are not changed by this proposal, or are emitting less than 25 TPY of VOM. (P.C. 16 at 20-21.)

The Agency also asserts that Harris Marcus should currently be complying with current metal coating VOM content limitations and that Harris Marcus exceeds the 100 tons per year maximum theoretical emissions for wood coatings as well. (P.C. 16 at 18.) With regard to the other suggested changes by Harris Marcus, the Agency maintains that the record lacks sufficient information to proceed with those changes. (P.C. 16 at 18-20.) The Agency suggests that if Harris Marcus is a "unique" facility, the changes are better addressed through an adjusted standard. (P.C. 16 at 20.)

Board Action

The Board will lower the applicability threshold for wood furniture coating operations from 100 tons per year maximum theoretical emissions (MTE) to 25 tons per year potential to emit (PTE) as requested by the Agency in this proposal. The Board will make this change because the Agency has demonstrated that the change in applicability level is a necessary part of the Illinois 15% ROP Plan, and because the record shows that the change in applicability is economically reasonable for the majority of the sources in the Illinois wood furniture coating industry. The Board will also promulgate the VOM emission limits for the different types of wood furniture coatings proposed by the Agency at 218/219.204(l), which represents no change from current regulations.

The CAA requires all moderate and worse ozone nonattainment areas to achieve by 1996 a 15% reduction of 1990 VOM emissions. The states are allowed to choose the control measures for the nonattainment areas that will reduce VOM emissions to meet the 15% requirement, except that the CAA identifies the specific measures that are not creditable towards the 15% reduction. Further, the CAA requires states to account for any growth in emissions after 1990 in developing the 15% ROP plan. Therefore, a state may develop a 15% ROP plan which would require actual VOM emission reductions for certain categories of sources, and maintenance of baseline emission levels for other source categories to meet the 15% VOM reduction requirement.

For example, if there are eight sources in a nonattainment area with a 1990 baseline emission level of 100 tons per year, a 15% ROP plan may require six of the sources to achieve reductions totaling 15 tons per year (15%) and require the remaining two sources to maintain baseline emission levels. Even though the two sources are not required to reduce VOM emissions, they are an integral component of the 15% ROP plan since they contribute towards the 15% VOM reduction by maintaining the 1990 baseline emission levels.

The Agency notes that it developed a plan incorporating the reduction measures for each nonattainment area (Chicago and East St. Louis) to reduce VOM emissions to meet the 15% VOM reduction requirement. (Prop. at 1-2.) Further, the Agency states that tightening the wood furniture coating applicability levels was identified as a control measure for the 15% ROP plan for both nonattainment areas. (Prop. at 2-3.) In this regard, the Agency states that while no reductions are expected from this category, the proposed amendments are important because they ensure that VOM emission increases will not occur in wood furniture coating operations in comparison to the 1990 VOM emission level. (Prop. at 12.) In effect, the proposed change of applicability level for wood furniture coating operations from 100 tons per year MTE

to 25 tons per year PTE is an integral part of the Agency's 15% ROP plan.

Therefore, if the amendments to the wood furniture coating requirements are not accepted by the Board as a part of the 15% ROP plan, the Agency may have to identify other measures to offset any increases in VOM emissions from wood coating operations above the 1990 baseline levels to meet the 15% reduction requirement. For these reasons the Board finds that the inclusion of wood furniture coatings in the proposed 15% ROP plan is necessary and this proposal was appropriately filed under Section 28.5 of the Act.

The Board is also required by the Act to consider the economic reasonableness and technical feasibility of rules before promulgation. The Board will first examine technical feasibility and then the economic reasonableness of the proposed wood furniture coating limitation. As proposed, the amendments to the wood coating requirements of Parts 218 and 219 do not change the existing VOM limits for wood furniture coatings. The affected facilities may comply with the proposed regulations by: using compliant coatings; adding emission control equipment; or limiting emissions to less than 25 tons per year. Regarding VOM limits for coatings, the Agency states that coatings with VOM content levels which meet the limitations are available and have been used by numerous sources for several years. (Prop. at 19.) Further, the Agency states that the coating applicators required for wood furniture coaters in the proposed regulations are available and used by most sources. (*Id.*) Regarding add-on controls, the Agency notes that technology for controlling VOM emissions from wood furniture coating operations through add-on control is available and includes thermal or catalytic incinerators and adsorption devices. (*Id.*) However, the Agency admits that it could not find any instances of wood furniture coating operations using add-on controls in Illinois nonattainment areas. (Attach. 16c at 3.) In this regard, the Agency states that it is likely that any sources impacted by this proposal would choose permit conditions to place them below the applicability level or compliant coatings rather than add-on controls as the method of compliance. (Exh.7 at 3.)

Harris Marcus states that compliance with the proposed regulations would result in severe restrictions on its production or monetary burden because of the nature of its operation, which involves a custom made-to-order operation with over 15,000 finished goods end items. Harris Marcus says that it used over 40 different coatings on its wood furniture products in 1993 of which some coatings do not meet the proposed limitations. (Exh. 5 at 4, 5.) Further, Harris Marcus notes that its efforts to use compliant coatings instead of high VOM-content coatings have not resulted in the production of saleable products. Thus, Harris Marcus contends that the only compliance alternative available

under the proposed regulations is add-on pollution control equipment. In this regard, Harris Marcus does not question the availability of appropriate control technology, but argues that the costs associated with the installation of such controls are unreasonable.

The Agency's position on technical feasibility of the proposed regulations is based on the fact that the proposed VOM limits on coatings are the same as existing limits and on the observation that all existing sources are already in compliance with the proposed regulations. The Agency identified 19 potentially affected sources based on a review of its emission inventory system (EIS). (Attach. 16c at 6.) The Harris Marcus facility was not a part of this list of affected facilities. The record indicates that the 19 existing sources identified by the Agency are either complying by using compliant coatings or emitting less than 25 tons per year of VOM. None of these 19 compliant sources are using add-on controls. Harris Marcus contends that the only compliance alternative available for its facility is add-on controls.

The information in the record concerning economic reasonableness includes a discussion by the Agency of the costs of both reformulated coatings and add-on controls using the information included in the USEPA's draft CTG for wood furniture coating operations. The Agency has stated that one of the reasons for USEPA not including the CTG for wood furniture coating with other surface coating CTGs is due to the complexities involved in this industry. (Attach. 16c at 3.) According to the Agency, the total annual cost of switching from existing coatings to reformulated coatings range from: $85,330 to $1,128,860 for waterborne coating systems; $38,280 to $644,915 for hybrid waterborne coating systems; $144,170 to $1,083,480 for polyester/polyurethane (pe/pu) system; and $162,040 to $1,606,960 for hybrid pe/pu system. (Attach. 16c at 10-13.) These costs consider material storage, drying capabilities, paint circulation, and the need for clean room environment. The cost break-downs for the four types of reformulated coatings are provided in Exhibit 23.

Regarding add-on controls, the Agency notes that the costs vary with the size of the source and the type of equipment used. (Prop. at 19.) Information presented by the Agency indicates that for sources emitting 50 TPY to 500 TPY, the capital costs for control devices range from $446,400 to $11,393,400. The operating costs range from $170,700 to $3,439,500. (Attach. 16c at 9.) These costs are based on a scheme where a single control device controls all VOM emissions from the source. The costs for different types of control equipment are presented in the proposal. (*Id.*)

Harris Marcus also presented a preliminary estimate of annualized cost of VOM control for its coating processes. According to this information, the total direct annual costs for operating a thermal regenerative incinerator would be $414,079 and for a thermal recuperative incinerator would be $1,873,000. (Exh. 23.) In addition, Harris Marcus expects equipment and engineering costs to exceed $1,500,000. These estimates cover all coating operations, which include metal and wood coating lines. The cost information provided by Harris Marcus is presented in Exhibit 23.

In summary, the Agency has requested that the Board lower the applicability level for wood furniture coating operations from 100 tons per year MTE to 25 tons per year PTE. The Agency states that the change is part of the state's 15% ROP Plan, and the change is economically reasonable and technically feasible because 19 potentially affected facilities can be in compliance at no cost. Harris Marcus contends that they are adversely affected because lowering the VOM emission applicability level would require them to use unreasonably expensive add-on equipment to control VOM emissions. After careful consideration of the record, the Board finds that the change in applicability level is economically reasonable and technically feasible for the majority (19 out of 20) of wood-furniture coating operations in Illinois, and therefore the Board will adopt the proposed changes at Sections 218.208(b) and 219.108(b). There is not enough specific information in the record about Harris Marcus' operations to determine whether or not a different VOM emission applicability level should apply to it. Harris Marcus might wish to consider other relief as provided for in the Act such as filing a proposal with the Board for possible site-specific rulemaking or adjusted standard relief.

In reviewing the other requests for changes by Harris Marcus, the Board agrees with the Agency that the record lacks sufficient information to proceed at this time. The Board again encourages Harris Marcus to review the possibility of a site-specific rulemaking or adjusted standard to address its remaining concerns.

SOCMI

Stepan Company (P.C. 12)

Stepan Company (Stepan) requests in its comment that the proposed rule regulating SOCMI be extended to include Stepan's non-SOCMI processes. (P.C. 12 at 1-2.) Stepan maintains that its processes are virtually identical to the processes which would be covered by the Agency's proposal, and in fact those units can produce either SOCMI or non-SOCMI products. (*Id.*) Stepan argues that the approach proposed in Subpart V is more appropriate than the provisions of the general rule, and

inclusion of Stepan's processes in this rulemaking might alleviate the need for site-specific relief being sought by Stepan in two proceedings, one before the Board (AS 88-2) and one rule before USEPA. (P.C. 12 at 2, 8-10.)

Stepan points out that the Agency, in response to questioning, agreed that the approach proposed for SOCMI sources is "technically appropriate for Stepan's continuous non-SOCMI distillation and reactor processes". (Tr. at 44-46; P.C. 12 at 2.) Stepan also provides discussion of three of its processes and points out similarities between the non-SOCMI processes and the SOCMI processes. Stepan notes that "some of Stepan's products are listed as SOCMI chemicals in the Federal CTG list but not in the State's Appendix A list." (P.C. 12 at 6.) Based on the comments filed and the testimony of the Agency, Stepan urges the Board to adopt amendatory language which will include Stepan's processes at its Millsdale Plant in Subpart V of the proposal. (P.C. 12 at 9 and 12.)

Agency Response

The Agency agrees that the VOMs produced in Stepan's continuous reactor and distillation operations in Stepan's Millsdale facility "have characteristics similar to SOCMI chemicals that are manufactured as a primary product." (P.C. 16 at 38.) The Agency states that it "believes that inclusion of these processes is reasonable". (*Id.*) Therefore, the Agency has recommended an amendment to include Stepan's processes in the proposal. (P.C. 16 at 38-39.)

Board Action

The Board finds that the record supports the inclusion of Stepan's processes in the rule to be subject to the SOCMI regulations. Therefore the Board will amend Section 218.431 by adding subsection (a)(2) which will read:

> 2) All continuous distillation and reactor process emission units not subject to Section 218.520 through 218.527 of this Part, and located within Stepan Company's Millsdale manufacturing facility, Elwood, Illinois.

TOUCH-UP AND REPAIR COATINGS, MARINE ENGINE COATINGS AND CROSS-LINE AVERAGING

1. Illinois Environmental Regulatory Group (IERG) (P.C. 13)

IERG, in its final comment, notes that IERG has met with the Agency to discuss concerns about the regulatory proposal. Specifically, those concerns include marine engine manufacturing industry's ability to comply with the coating standards, the

necessity of an exemption from the coating standards for touch-up or repair coating and the availability of cross-line averaging provisions to show compliance with the coating standards. (P.C. 13 at 1.) IERG also expressed support for the consensus reached between S & C Electric and the Agency for cross-line averaging, which is discussed in detail below. (P.C. 13 at 2.)

Ms. Elizabeth Steinhour testified on behalf of IERG regarding touch-up and repair coatings (Exh. 30). Ms. Steinhour testified that scratches or nicks may occur during the manufacturing process and repair is made using a limited amount of coating. (Exh. 30 at 2.) Ms. Steinhour states:

> It is my understanding that generally, but not in all instances, the application of touch-up coatings which would meet the emissions limitations dictated by the proposed Sections 218/219.204 is inappropriate in that such coatings are either not readily available, inadequate for the purpose intended, or would require a substantial revision of the application processes currently utilized for touch-up operations. (*Id.*)

Ms. Steinhour also testified that "the inclusion of such a touch-up exemption within the regulations would not constitute a loosening for the Federal Implementation Plan." (Exh. 30 at 6.)

IERG provided proposed amendments to the proposal which would exempt touch-up and repair coatings. (P.C. 13 at 3-6.) IERG states that it and the Agency agree that "the adoption of the proposed exemption would place necessary, yet practical, limitations on the use of touch-up and repair coatings." (P.C. 13 at 6.) IERG also states in its final comment that it supports the adoption of cross-line averaging provisions including the revisions proposed by S & C Electric (See P.C. 15, as discussed above). (*Id.*)

Agency Response to IERG

The Agency agrees that a higher VOM content for marine engine coatings is necessary. Therefore, the Agency is recommending an amendment to the proposal which would raise the limit to 3.5 lb/gal for as-applied coating for baked applications. (P.C. 16 at 11.) The Agency notes that of significant importance is the fact that various gaskets and plastic parts used in the paints sub-assemblies are subject to failure at higher baking temperatures that are employed to accommodate lower VOM content coatings. (*Id.*) Failure of these gaskets and parts could create loss of torque control, which has potential serious product reliability and safety ramifications. (*Id.*)

The Agency is also recommending a change in cross-line averaging as discussed in detail below with the comments filed by S & C Electric.

Board Action

The Board accepts the recommendations for amendments as proposed by the IERG and the Agency. The Board will amend Section 218.204(j) to read:

5)	Marine engine coating			
	A)	Air Dried	0.42 0.42*	(3.5) (3.5)*
	B)	Baked		
		i) Primer/Topcoat	0.42 0.42*	(3.5) (3.5)*
		ii) Corrosion resistant basecoat	0.42 0.28*	(3.5) (2.3)*
	C)	Clear Coating	0.52 0.52*	(4.3) (4.3)*

7) Definitions

A) For purposes of subsection 218.204(j)(5) of this Section, the following terms are defined:

i) "Corrosion resistant basecoat" means, for purposes of subsection 218.204(j)(5)(B)(ii) of this Section, a water-borne epoxy coating applied via an electrodeposition process to a metal surface prior to spray coating, for the purpose of enhancing corrosion resistance.

ii) "Electrodeposition process" means for the purposes of subsection 218.204(j)(5) of this Section, a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created.

(iii) "Marine engine coating" means, for purposes of subsection 218.204(j)(5) of this Section, any extreme performance protective, decorative or functional coating applied to an engine that is used to propel watercraft.

B) For purposes of subsection 218.204(j)(6) of this Section, "metallic coating" means a coating which contains more than 1/4 lb/gal of metal particles, as applied.

The Board will also amend Section 218/219.208 to include:

c) On and after March 15, 1996, the limitations of this Subpart shall not apply to touch-up and repair coatings used by a coating source described by subsections 218.204(b), (d), (f), (g), (i), (j), (n) and (o) of this Subpart; provided that the source-wide volume of such coatings used does not exceed 0.95 l (1 quart) per eight-hour period or exceed 209 l/yr (55 gal/yr) for any rolling twelve month period. Recordkeeping and reporting for touch-up and repair coatings shall be consistent with Section 218.211(b)(4) of this Subpart.

d) On and after March 15, 1996, the owner or operator of a coating line or a group of coating lines using touch-up and repair coatings that are exempted from the limitations of Section 218.204(b), (d), (f), (g), (i), (j), (n) and (o) of this Subpart because of the provisions of Section 218.208(c) of this Subpart shall:

1) Collect and record the name, identification number, and volume used of each touch-up and repair coating, as applied on each coating line, per eight-hour period and per month;

2) Perform calculations on a daily basis, and maintain at the source records of such calculations of the combined volume of touch-up and repair coatings used source-wide for each eight-hour period;

3) Perform calculations on a monthly basis, and maintain at the source records of such calculations of the combined volume of touch-up and repair coatings used source-wide for the month and the rolling twelve month period;

4) Prepare and maintain at the source an annual summary of the information required to be compiled pursuant to subsection (c)(4)(A) and (c)(4)(B) of

this Section on or before January 31 of the following year;

5) Maintain at the source for a minimum period of three years all records required to be kept under this subsection and make such records available to the Agency upon request;

6) Notify the Agency in writing if the use of touch-up and repair coatings at the source ever exceeds a volume of 0.95 l (1 quart) per eight-hour period or exceeds 209 l/yr (55 gal/yr) for any rolling twelve month period within 30 days after any such exceedance. Such notification shall include a copy of any records of such exceedance; and

7) "Touch-up and repair coatings" means, for purposes of 35 Ill. Adm. Code 218.208, any coating used to cover minor scratches and nicks that occur during manufacturing and assembly processes.

Section 218.431 will read:

a) The provisions of Sections 218.431 through 218.436 of this Subpart shall apply to:

1) Every owner or operator of any chemical manufacturing process unit that manufactures, as a primary product, one or more of the chemicals listed in Appendix A of this Part and that chemical manufacturing process unit causes or allows any reactor or distillation unit, either individually or in tandem, to discharge one or more process vent streams either directly to the atmosphere or to a recovery system; and

Section 219.431 will be amended to read:

a) The provisions of Sections 219.431 through 219.436 of this Subpart shall apply to every owner or operator of any chemical manufacturing process unit that manufactures, as a primary product, one or more of the chemicals listed in Appendix A of this Part and that chemical manufacturing process unit causes or allows any reactor or distillation unit, either individually or in tandem, to discharge one or more process vent streams either directly to the atmosphere or to a recovery system.

2. Outboard Marine Corporation (P.C. 14)

Outboard Marine Corporation (Outboard) filed a comment in support of two specific revisions initially proposed in the

testimony of Elizabeth Steinhour of IERG (which was discussed in detail above). Outboard supports a separate category under Section 218.204(j) regulating miscellaneous metal parts and product coatings for marine engine coatings. (P.C. 14 at 1-2.) Outboard maintains that coatings that meet the limits proposed are not available for marine engine coatings, so a specific section addressing marine engine coatings is necessary. (P.C. 14 at 2.)

Outboard also supports an exemption for touch-up coating. Outboard points out that it is critical that it be allowed to touch-up any scratches, nicks, or other minor paint defects which might occur during manufacturing and the assembly process. (*Id.*) Low VOM coatings are not viable and Outboard is not aware of an alternative low-VOM technology that could be used. (P.C. 14 at 2-3.) Outboard does ask that the Board consider a daily limit for touch-up coatings rather than the eight hour limit proposed by IERG. (P.C. 14 at 3.) Outboard argues that recordkeeping for an eight hour period would be burdensome and impractical. (P.C. 14 at 3-4.)

Agency Response to Outboard

The Agency did not specifically respond to the comments of Outboard. Rather the Agency responded to IERG comments which were similar to the comments by Outboard. Those comments and the response are discussed above.

Board Action

The Board finds that the record lacks sufficient information to support the adoption of a daily limit for touch-up coatings recommended by Outboard.

3. S & C Electric Company (P.C. 15)

Mr. Robert Sullivan testified on behalf of the S & C Electric Company at the Board's December 2, 1994 hearing. Mr. Sullivan testified that the S & C Electric Company owns and operates a facility in Chicago which manufactures as one of its products a high-voltage metal enclosed switch gear. (Exh. 33 at 1.) Mr. Sullivan testified in support of the adoption of the cross-line averaging proposal. (Exh. 33 at 2.)

S & C Electric notes in its final comment that the cross-line averaging provision in this proposal does not "anticipate the actual situation at S & C". (P.C. 15 at 3.) That situation is that S & C has spent to date about $10 million developing and implementing the use of powder coatings prior to this rulemaking. (*Id.*) As a result, S & C has reduced its emissions over 15%, but at this time is unable to convert any additional lines to powder coatings. (P.C. 15 at 3.) Therefore, S & C and the Agency have

developed proposed language which would allow cross-line averaging using coating lines added after July 1, 1988 under very limited circumstances. (P.C. 15 at 4-5.)

S & C indicates in its final comment that it supports the exemption for touch-up and repair coatings proposed by IERG. (P.C. 15 at 6.)

Agency Response to S & C

The Agency, in its final comments, recommends a change in the proposal which would allow credit to be given to facilities which were making the change to powder coatings even before there was a great incentive. (P.C. 16 at 15.) The change is being suggested to Sections 218/219.212 and 218/219.213.

Board Action

The Board accepts the recommendations for amendments as proposed by S & C and the Agency. The Board will amend Sections 218.212, 218.213, 219.212 and 219.213 to read:

Section 218/219.212 Cross-Line Averaging to Establish Compliance for Coating Lines

c) Notwithstanding subsection (a) of this Section, any owner or operator of a coating line subject to the limitations set forth in Section 218.204 of this Subpart and electing to rely on this Section to demonstrate compliance with this Subpart, may also include as a participating coating line, until December 31, 1999, only, any replacement line that satisfies all of the following conditions:

1) The replacement line is operated as a powder coating line;

2) The replacement line was added after July 1, 1988; and

3) The owner or operator also includes as a participating coating line one or more coating lines that satisfy the criteria of a replacement line, as described in subsection (a) of this Section.

d) To demonstrate compliance with this Section, a source shall establish the following:

1) An alternative daily emission limitation shall be determined for all participating coating lines at the source according to subsection (d)(2) of this

Section. All participating coating lines shall be factored in each day to demonstrate compliance. Provided compliance is established pursuant to the requirements in this subsection, nothing in this Section requires daily operation of each participating line. Actual daily emissions from all participating coating lines (E_d) shall never exceed the alternative daily emission limitation (A_d) and shall be calculated by use of the following equation:

Section 218/219.213 Recordkeeping and Reporting for Cross-Line Averaging Participating Coating Lines

ny owner or operator of a coating line that elects to comply by ans of Section 218.212 of this Subpart shall establish the following:

a) By the date consistent with Section 218.210(f) of this Subpart, or upon initial start-up of a new coating line replacing a pre-existing coating line, as defined in Section 218.212 of this Subpart, or upon changing the method of compliance for a pre-existing coating line from the requirements of Section 218.204 or Section 218.207 of this Subpart to the requirements of Section 218.212 of this Subpart, the owner or operator of the source shall certify to the Agency that each participating coating line, as determined in accordance with Section 218.212 of this Subpart, will be in compliance with Section 218.212 of this Subpart on and after a date consistent with Section 218.210(f) of this Subpart, or on and after the initial start-up date of such participating coating lines. Such certification shall also include:

8) The method by which the owner or operator has calculated K, for the equation contained in Section 218.212(d)(2)(B) of this Subpart, if applicable.

CONCLUSION

The Board carefully considered all public comments, as well as the testimony and exhibits in this matter. Although areas of controversy still exist, the majority of the proposal is supported by the regulated community. Where controversy remains in the areas of bakeries and plastic parts coatings, the Board found at second notice that the record supported proceeding with those proposed amendments as modified by suggestions from the Agency. In the area of wood furniture coatings, the Board has found that the Agency-proposed amendments to the wood furniture

coatings regulations are appropriate for a Section 28.5 rulemaking and therefore, those provisions also proceeded to second notice.

The Board accepted all agreed upon requested changes as those changes were supported by the record before the Board. The Board found that the proposed rules are technically feasible and economically reasonable, and that the rules are necessary to meet the requirements of the Clean Air Act. The Board found that the record supported proceeding with the proposed rules, as amended, to second notice.

The Joint Committee on Administrative Rules issued a certificate of no objection to the proposed rules at the March 14, 1995 meeting. JCAR had requested and the Board agreed to nonsubstantive typographical changes. Thus, the proposal may now proceed to final adoption. The Board finds that the record supports proceeding to final notice with the proposal as amended at second notice and in this opinion. The Board hereby adopts this proposal for final notice.

ORDER

The Board directs the Clerk to cause the filing of the following proposal for final notice with the Secretary of State Code Unit for publication in the Illinois Register:

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSION STANDARDS AND LIMITATIONS FOR STATIONARY SOURCES

PART 211
DEFINITIONS AND GENERAL PROVISIONS

SUBPART B: DEFINITIONS

Section	
211.660	Automotive/Transportation Plastic Parts
211.670	Baked Coatings
211.680	Bakery Oven
211.820	Business Machine Plastic Parts
211.980	Chemical Manufacturing Process Unit
211.1780	Distillation Unit
211.1880	Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) Shielding Coatings
211.1900	Electrostatic Prep Coat
211.2290	Fermentation Time
211.2360	Flexible Coating
211.2365	Flexible Operation Unit
211.2630	Gloss Reducers

211.4055 Non-Flexible Coating
211.4740 Plastic Part
211.5065 Primary Product
211.5480 Reflective Argent Coating
211.5600 Resist Coat
211.6060 Soft Coat
211.6140 Specialty Coatings
211.6400 Stencil Coat
211.6580 Texture Coat
211.6880 Vacuum Metallizing
211.7400 Yeast Percentage

AUTHORITY: Implementing Sections 9, 9.1 and 10 and authorized by Section 27 and 28.5 of the Environmental Protection Act ~~(Ill. Rev. Stat. 1991, ch. 111½, pars. 1009, 1009.1, 1010 and 1027), (P.A. 87-1213, effective September 26, 1992)~~ [415 ILCS 5/9, 9.1, 10, 27 and 28.5].

SOURCE: Adopted as Chapter 2: Air Pollution, Rule 201: Definitions, R71-23, 4 PCB 191, filed and effective April 14, 1972; amended in R74-2 and R75-5, 32 PCB 295, at 3 Ill. Reg. 5, p. 777, effective February 3, 1979; amended in R78-3 and 4, 35 PCB 75 and 243, at 3 Ill. Reg. 30, p. 124, effective July 28, 1979; amended in R80-5, at 7 Ill. Reg. 1244, effective January 21, 1983; codified at 7 Ill. Reg. 13590; amended in R82-1 (Docket A) at 10 Ill. Reg. 12624, effective July 7, 1986; amended in R85-21(A) at 11 Ill. Reg. 11747, effective June 29, 1987; amended in R86-34 at 11 Ill. Reg. 12267, effective July 10, 1987; amended in R86-39 at 11 Ill. Reg. 20804, effective December 14, 1987; amended in R82-14 and R86-37 at 12 Ill. Reg. 787, effective December 24, 1987; amended in R86-18 at 12 Ill. Reg. 7284, effective April 8, 1988; amended in R86-10 at 12 Ill. Reg. 7621, effective April 11, 1988; amended in R88-23 at 13 Ill. Reg. 10862, effective June 27, 1989; amended in R89-8 at 13 Ill. Reg. 17457, effective January 1, 1990; amended in R89-16(A) at 14 Ill. Reg. 9141, effective May 23, 1990; amended in R88-30(B) at 15 Ill. Reg. 5223, effective March 28, 1991; amended in R88-14 at 15 Ill. Reg. 7901, effective May 14, 1991; amended in R91-10 at 15 Ill. Reg. 15564, effective October 11, 1991; amended in R91-6 at 15 Ill. Reg. 15673, effective October 14, 1991; amended in R91-22 at 16 Ill. Reg. 7656, effective May 1, 1992; amended in R91-24 at 16 Ill. Reg. 13526, effective August 24, 1992; amended in R93-9 at 17 Ill. Reg. 16504, effective September 27, 1993; amended in R93-11 at 17 Ill. Reg. 21471, effective December 7, 1993; amended in R93-14 at 18 Ill. Reg. 1253, effective January 18, 1994; amended in R94-12 at 18 Ill. Reg. 14962, effective September 21, 1994; amended in R94-14 at 18 Ill. Reg. 15744, effective October 17, 1994; amended in R94-15 at 18 Ill. Reg. 16379, effective October 25, 1994; amended in R94-16 at 18 Ill. Reg. 16929, effective November 14, 1994; amended in R94-21 at 19 Ill. Reg. _____, _____, effective _____.

BOARD NOTE: This Part implements the Environmental Protection Act as of July 1, 1994.

SUBPART B: DEFINITIONS

Section 211.660 Automotive/Transportation Plastic Parts

"Automotive/transportation plastic parts" means the interior and exterior plastic components of automobiles, trucks, tractors, lawnmowers, and other like mobile equipment intended for primary use on land, with the exception of the following: plastic parts coated on the main (body) paint line in automobile and light duty truck assembly plants, and plastic parts coated during refinishing of automobile, trucks, tractors, lawnmowers and other like mobile equipment.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.670 Baked Coatings

"Baked coatings" means any coating which is cured or dried in an oven where the oven air temperature exceeds 90ºC (194ºF)~~.~~, or any coating which is cured in any manner that does not otherwise fit into the definition of "air dried coatings," as defined in Section 211.330 of this Part.

Section 211.680 Bakery Oven

"Bakery oven" means an oven used at any time for the purpose of baking yeast-leavened products, including, but not limited to, breads, rolls and buns.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.820 Business Machine Plastic Parts

"Business machine plastic parts" means the plastic housings and other exterior plastic components of electronic office equipment and of medical and musical equipment, including, but not limited to the following: computers, monitors, printers and keyboards, facsimile machines, copiers, microfiche readers, cellular and standard phones, and pencil sharpeners. This definition excludes internal electrical components of business machines.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.980 Chemical Manufacturing Process Unit

"Chemical manufacturing process unit" means the equipment assembled and connected by pipes or ducts to process raw materials and to manufacture an intended product. For purposes of 35 Ill. Adm. Code 218.431 through 218.436, and 219.431 through 219.436, the chemical manufacturing process unit includes reactors and their associated product separators and recovery devices, distillation units and their associated distillate receivers, and recovery devices. A chemical manufacturing

process unit includes, but is not limited to, any combination of pumps, compressors, agitators, pressure relief devices, sampling connection systems, open ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems. A chemical manufacturing process unit is identified by its primary product, as defined in Section 211.5060 of this Part.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.1780 Distillation Unit

"Distillation unit" means a device or vessel in which one or more feed streams are separated into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). Separation is achieved by a redistribution of the components between the liquid and the vapor phases by vaporization and condensation as they approach equilibrium within the distillation unit. A distillation unit includes, but is not limited to, the distillate receiver, reboiler, vacuum pump, steam jet and any associated recovery system.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.1880 Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) Shielding Coatings

"Electromagnetic interference/radio frequency interference (EMI/RFI) coatings" means coatings used on business machine plastic housings to attenuate electromagnetic and radio frequency interference signals that would otherwise pass through the plastic housing.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.1900 Electrostatic Prep Coat

"Electrostatic prep coat" means a coating that is applied to a plastic part solely to provide conductivity for the subsequent application of a prime coat, a topcoat, or other coating through the use of electrostatic application methods. An electrostatic prep coat is clearly identified as an electrostatic prep coat on its accompanying material safety data sheet.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.2290 Fermentation Time

"Fermentation time" means the time elapsed between adding yeast to the dough and placing the product into the oven, expressed in hours to the nearest one-tenth hour.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.2360 Flexible Coating

"Flexible coating" means a paint with the ability to withstand dimensional changes.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.2365 Flexible Operation Unit

"Flexible operation unit" means a chemical manufacturing process unit that manufactures different chemical products periodically by alternating raw materials or operating conditions.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.2630 Gloss Reducers

"Gloss reducers" means a low-gloss coating formulated to eliminate glare for safety purposes on interior surfaces of a vehicle, as specified in the U.S. Department of Transportation Motor Vehicle Safety Standards.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.4055 Non-Flexible Coating

"Non-flexible coating" means a paint without the ability to withstand dimensional changes.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.4740 Plastic Part

"Plastic part" means a product, or piece of a product, made from a substance that has been formed from resin through the application of pressure or heat or both.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.5065 Primary Product

"Primary Product" means a product of a chemical manufacturing process unit that shall be determined according to the procedures specified as follows:

a) If a chemical manufacturing process unit produces more than one intended chemical product, the product with the greatest annual design capacity on a mass basis determines the primary product of the process.

b) If a chemical manufacturing process unit has two or more products that have the same maximum annual design capacity on a mass basis and if one of those chemicals is listed in 35 Ill. Adm. Code 218.Appendix A or 219.Appendix A, then the listed chemical is considered the primary product. If more than one of the products is listed in Appendix A of 35 Ill. Adm. Code 218 or 219, then the owner or operator may designate as the primary product any of the listed chemicals.

c) For a chemical manufacturing process unit that is designed and operated as a flexible operation unit and is used predominantly to produce one or more of the listed chemicals in 35 Ill. Adm. Code 218.Appendix A or 219.Appendix A, the primary product shall be determined based on the expected utilization for the five years following promulgation for existing sources and based on the expected utilization for the first five years after initial start-up for new sources.

1) If the flexible operation unit produces one product for the greatest annual operating time, then that product shall represent the primary product of the flexible operation unit.

2) If the flexible operation unit produces multiple chemicals equally based on operating time, then the product with the greatest annual production on a mass basis shall represent the primary product of the flexible operation unit.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.5480 Reflective Argent Coating

"Reflective argent coating" means a silver-colored coating that will reflect light.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.5600 Resist Coat

"Resist coat" means a coating that is applied to a plastic part before metallic plating to prevent deposits of metal on portions of the plastic part.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.6060 Soft Coat

"Soft coat" means any coating that provides a soft tactile feel similar to leather and a rich leather-like appearance when applied to plastic interior automotive parts and exterior business machine parts.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.6140 Specialty Coatings

"Specialty coatings" means, for the purposes of 35 Ill. Adm. Code 218 and 219, plastic parts coatings used for unusual job performance requirements. These products include adhesion primers, resist coatings, soft coatings, reflective coatings, electrostatic prep coatings, headlamp lens coatings, ink pad printing coatings, stencil coatings, vacuum metallizing coatings, gloss reducers, plating resist coatings, and plating sensitizer coatings.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.6400 Stencil Coat

"Stencil coat" means a coating that is applied over a stencil on a plastic part at a thickness of 1 mil or less of coating solids. Stencil coats are most frequently letters, numbers, or decorative designs.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.6580 Texture Coat

"Texture coat" means a coating applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.6880 Vacuum Metallizing

"Vacuum metallizing" means a process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 211.7400 Yeast Percentage

"Yeast percentage" means lbs of yeast per hundred lbs of total flour in the recipe, expressed as a percentage.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSIONS STANDARDS AND LIMITATIONS FOR STATIONARY SOURCES

PART 218
ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS FOR THE CHICAGO AREA

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SUBPART F: COATING OPERATIONS

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218.207 Alternative Emission Limitations
218.208 Exemptions from Emission Limitations
218.210 Compliance Schedule
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SUBPART FF: BAKERY OVENS

Section
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Section
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SUBPART TT: OTHER EMISSION UNITS

Section
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Section 218.Appendix G: TRE Index Measurements for SOCMI Reactors and Distillation Units
Section 218.Appendix H: Baseline VOM Content Limitations for Subpart F, Section 218.212 Cross-Line Averaging

AUTHORITY: Implementing Section 10 and authorized by Section 28.5 of the Environmental Protection Act ~~(Ill. Rev. Stat. 1991, ch. 111½, par. 1010) (P.A. 87-1213, effective September 26, 1992)~~ [415 ILCS 5/10 and 28.5].

SOURCE: Adopted at R91-7 at 15 Ill. Reg. 12231, effective August 16, 1991; amended in R91-23 at 16 Ill. Reg. 13564, effective August 24, 1992; amended in R91-28 and R91-30 at 16 Ill. Reg. 13864, effective August 24, 1992; amended in R93-9 at 17 Ill. Reg. 16636, effective September 27, 1993; amended in R93-14 at 18 Ill. Reg. 1945, effective January 24, 1994; amended in R94-12 at 18 Ill. Reg. 14973, effective September 21, 1994; amended in R94-15 at 18 Ill. Reg. 16392, effective October 25, 1994; amended in R94-16 at 18 Ill. Reg. 16950, effective November 15, 1994; amended in R94-21 at 19 Ill. Reg. _____, effective _____.

BOARD NOTE: This Part implements the Environmental Protection Act as of July 1, 1994.

SUBPART A: GENERAL PROVISIONS

Section 218.106 Compliance Dates

a) Except as otherwise provided in this Section ~~218.106 (c) below~~ or as otherwise provided in a specific Subpart of this Part, compliance with the requirements of all rules is required by July 1, 1991, or September 1, 1991, for all sources located in Cook, DuPage, Kane, Lake, McHenry or Will Counties, consistent with the appropriate provisions of Section 218.103 of this ~~Part~~ Subpart.

b) Except as otherwise provided in this Section ~~218.106 (c) below~~ or as otherwise provided in a specific Subpart of this Part, compliance with the requirements of this Part is required by November 15, 1993, for all sources located in Aux Sable Township or Goose Lake Township in Grundy County or in Oswego Township in Kendall County.

c) All emission units which meet the applicability requirements of Sections 218.402(a)(2), 218.611(b), 218.620(b), 218.660(a), 218.680(a), 218.920(b), 218.940(b), 218.960(b) or 218.980(b) of this Part, including emission units at sources which are excluded from the applicability criteria of Sections 218.402(a)(1), 218.611(a), 218.620(a), 218.920(a), 218.940(a), 218.960(a), or 218.980(a) of this Part by virtue of permit conditions or other enforceable means, must comply with the requirements of Subparts H, Z, AA, CC, DD, PP, QQ, RR or TT of this Part, respectively, by March 15, 1995. Any owner or operator of an emission unit which has already met the applicability requirements of Sections 218.402(a)(1), 218.611(a), 218.620(a), 218.920(a), 218.940(a), 218.960(a), 218.980(a) of this Part on or by the effective date of this subsection is required to comply with all compliance dates or schedules found in Sections 218.106(a) or 218.106(b) ~~above~~, as applicable.

d) Any owner or operator of a source with an emission unit subject to the requirements of Section 218.204(m)(2) or (m)(3) of this Part shall comply with those requirements by March 25, 1995.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

SUBPART F: COATING OPERATIONS

Section 218.204 Emission Limitations

Except as provided in Sections 218.205, 218.207 ~~and~~ , 218.208 , and 218.212 of this ~~Part~~ Subpart, no owner or operator of a coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for the specified coating. Compliance with the emission limitations

marked with an asterisk in this Section is required on and after March 15, 1996. Compliance with emission limitations not marked with an asterisk is required until March 15, 1996. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. Compliance with this Subpart must be demonstrated through the applicable coating analysis test methods and procedures specified in Section 218.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 218.211(c) of this ~~Part~~ Subpart except where noted. (Note: The equation presented in Section 218.206 of this Part shall be used to calculate emission limitations for determining compliance by add-on controls, credits for transfer efficiency, emissions trades and cross-line averaging.) The emission limitations are as follows:

		kg/l	lb/gal
a)	Automobile or Light-Duty Truck Coating		
1)	Prime coat	0.14	(1.2)
		0.14*	(1.2)*
2)	Primer surface coat	1.81	(15.1)
		1.81*	(15.1)*

(Note: The primer surface coat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire primer surfacer operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b) and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 does not apply to the primer surface limitation.)

		kg/l	lb/gal
3)	Topcoat	1.81	(15.1)
		1.81*	(15.1)*

(Note: The topcoat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire topcoat operation. Compliance shall be

demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b) of this Part and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 of this Part does not apply to the topcoat limitation.)

		kg/l	lb/gal
4)	Final repair coat	0.58	(4.8)
		0.58*	(4.8)*
b)	Can Coating	kg/l	lb/gal
1)	Sheet basecoat and overvarnish	~~0.34~~	~~(2.8)~~
	A) Sheet basecoat	0.34	(2.8)
		0.26*	(2.2)*
	B) Overvarnish	0.34	(2.8)
		0.34	(2.8)*
2)	Exterior basecoat and overvarnish	0.34	(2.8)
		0.25*	(2.1)*
3)	Interior body spray coat	~~0.51~~	~~(4.2)~~
	A) Two piece	0.51	(4.2)
		0.44*	(3.7)*
	B) Three piece	0.51	(4.2)
		0.51*	(4.2)*
4)	Exterior end coat	0.51	(4.2)
		0.51*	(4.2)*
5)	Side seam spray coat	0.66	(5.5)
		0.66*	(5.5)*
6)	End sealing compound coat	0.44	(3.7)
		0.44*	(3.7)*
		kg/l	lb/gal
c)	Paper Coating	0.35	(2.9)
		0.28*	(2.3)*

(Note: The paper coating limitation shall not apply to any owner or operator of any paper coating line on

which printing is performed if the paper coating line complies with the emissions limitations in Subpart H: Printing and Publishing, Section 218.401 of this Part.)

		kg/l	lb/gal
d)	Coil Coating	0.31	(2.6)
		0.20*	(1.7)*
e)	Fabric Coating	0.35	(2.9)
		0.28*	(2.3)*
f)	Vinyl Coating	0.45	(3.8)
		0.28*	(2.3)*
g)	Metal Furniture Coating	~~0.36~~	~~(3.0)~~
	1) Air dried	0.36	(3.0)
		0.34*	(2.8)*
	2) Baked	0.36	(3.0)
		0.28*	(2.3)*
h)	Large Appliance Coating	~~0.34~~	~~(2.8)~~
	1) Air dried	0.34	(2.8)
		0.34*	(2.8)*
	2) Baked	0.34	(2.8)
		0.28*	(2.3)*

(Note: The limitation shall not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 0.95 l (1 quart) in any one rolling eight-hour period.)

		kg/l	lb/gal
i)	Magnet Wire Coating	0.20	(1.7)
		0.20*	(1.7)*
j)	Miscellaneous Metal Parts and Products Coating		
	1) Clear coating	0.52	(4.3)
		0.52*	(4.3)*
	~~2) Air-dried coating~~	~~0.42~~	~~(3.5)~~
	~~3~~2) Extreme performance coating	~~0.42~~	~~(3.5)~~
	A) Air dried	0.42	(3.5)
		0.42*	(3.5)*

	B) Baked	0.42 0.40*	(3.5) (3.3)*
~~4~~3)	Steel pail and drum interior coating	~~(~~0.52~~)~~ 0.52*	(4.3) (4.3)*
~~5~~4)	All other coatings	~~0.36~~	~~(3.0)~~
	A) Air Dried	0.42 0.40*	(3.5) (3.3)*
	B) Baked	0.36 0.34*	(3.0) (2.8)*
5)	Marine engine coating		
	A) Air Dried	0.42 0.42*	(3.5) (3.5)*
	B) Baked		
	i) Primer/Topcoat	0.42 0.42*	(3.5) (3.5)*
	ii) Corrosion resistant basecoat	0.42 0.28*	(3.5) (2.3)*
	C) Clear Coating	0.52 0.52*	(4.3) (4.3)*
6)	Metallic coating		
	A) Air Dried	0.42 0.42*	(3.5) (3.5)*
	B) Baked	0.36 0.36	(3.0) (3.0)*

7) Definitions

A) For purposes of subsection 218.204(j)(5) of this Section, the following terms are defined:

i) "Corrosion resistant basecoat" means, for purposes of subsection 218.204(j)(5)(B)(ii) of this Section, a water-borne epoxy coating applied via an electrodeposition process to a metal surface prior to spray coating, for the purpose of enhancing corrosion resistance.

ii) "Electrodeposition process" means a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created.

iii) "Marine engine coating" means any extreme performance protective, decorative or functional coating applied to an engine that is used to propel watercraft.

B) For purposes of subsection 218.204(j)(6) of this Section, "metallic coating" means a coating which contains more than 1/4 lb/gal of metal particles, as applied.

k) Heavy Off-Highway Vehicle Products Coating	kg/l	lb/gal
1) Extreme performance prime coat	0.42 0.42*	(3.5) (3.5)*
2) Extreme performance top-coat (air dried)	0.42 0.42*	(3.5) (3.5)*
3) Final repair coat (air dried)	0.42 0.42*	(3.5) (3.5)*
4) All other coatings are subject to the emission limitations for miscellaneous metal parts and products coatings in subsection (j) above.		
l) Wood Furniture Coating	kg/l	lb/gal
1) Clear topcoat	0.67 0.67*	(5.6) (5.6)*
2) Opaque stain	0.56 0.56*	(4.7) (4.7)*
3) Pigmented coat	0.60 0.60*	(5.0) (5.0)*
4) Repair coat	0.67 0.67*	(5.6) (5.6)*
5) Sealer	0.67 0.67*	(5.6) (5.6)*
6) Semi-transparent stain	0.79 0.79*	(6.6) (6.6)*

7)	Wash coat	0.73	(6.1)
		0.73*	(6.1)*

(Note: An owner or operator of a wood furniture coating operation subject to this Section shall apply all coatings, with the exception of no more than 37.8 l (10 gal) of coating per day used for touch-up and repair operations, using one or more of the following application systems: airless spray application system, air-assisted airless spray application system, electrostatic spray application system, electrostatic bell or disc spray application system, heated airless spray application system, roller coating, brush or wipe coating application system, dip coating application system or high volume low pressure (HVLP) application system.)

m) Existing Diesel-Electric Locomotive Coating Lines in Cook County

		kg/l	lb/gal
1)	Extreme performance prime coat	0.42	(3.5)
		0.42*	(3.5)*
2)	Extreme performance top-coat (air dried)	0.42	(3.5)
		0.42*	(3.5)*
3)	Final repair coat (air dried)	0.42	(3.5)
		0.42*	(3.5)*
4)	High-temperature aluminum coating	0.72	(6.0)
		0.72*	(6.0)*
5)	All other coatings	0.36	(3.0)
		0.36*	(3.0)*

n) Plastic Parts Coating: Automotive/Transportation

			kg/l	lb/gal
1)	Interiors			
	A)	Baked		
		i) Color coat	0.49*	(4.1)*
		ii) Primer	0.46*	(3.8)*
	B)	Air Dried		

	i)	Color coat	0.38*	(3.2)*
	ii)	Primer	0.42*	(3.5)*
2)	Exteriors (flexible and non-flexible)			
	A)	Baked		
	i)	Primer	0.60*	(5.0)*
	ii)	Primer non-flexible	0.54*	(4.5)*
	iii)	Clear coat	0.52*	(4.3)*
	iv)	Color coat	0.55*	(4.6)*
	B)	Air Dried		
	i)	Primer	0.66*	(5.5)*
	ii)	Clear coat	0.54*	(4.5)*
	iii)	Color coat (red & black)	0.67*	(5.6)*
	iv)	Color coat (others)	0.61*	(5.1)*
3)	Specialty			
	A)	Vacuum metallizing basecoats, texture basecoats	0.66*	(5.5)*
	B)	Black coatings, reflective argent coatings, air bag cover coatings, and soft coatings	0.71*	(5.9)*
	C)	Gloss reducers, vacuum metallizing topcoats, and texture topcoats	0.77*	(6.4)*
	D)	Stencil coatings, adhesion primers, ink pad coatings, electrostatic prep coatings, and resist coatings	0.82*	(6.8)*

	E)	Head lamp lens coatings	0.89*	(7.4)*

o) Plastic Parts Coating: Business Machine

		kg/l	lb/gal
1)	Primer	0.14*	(1.2)*
2)	Color coat (non-texture coat)	0.28*	(2.3)*
3)	Color coat (texture coat)	0.28*	(2.3)*
4)	Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings	0.48*	(4.0)*
5)	Specialty Coatings		
	A) Soft coat	0.52*	(4.3)*
	B) Plating resist	0.71*	(5.9)*
	C) Plating sensitizer	0.85*	(7.1)*

(Source: Amended at _____ Ill. Reg. _____, effective _____)

Section 218.205 Daily-Weighted Average Limitations

No owner or operator of a coating line subject to the limitations of Section 218.204 of this ~~Part~~Subpart and complying by means of this Section shall operate the subject coating line unless the owner or operator has demonstrated compliance with subsection (a), (b), (c), (d), (e), ~~or~~ (f), (g) (h) or (i) of this Section (depending upon the category of coating) through the applicable coating analysis test methods and procedures specified in Section 218.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 218.211(d) of this ~~Part~~Subpart:

a) No owner or operator of a coating line subject to only one of the limitations from among Section 218.204(a)(1), (a)(4), (c), (d), (e), (f)~~, (g), (h)~~, or (i) of this ~~Part~~Subpart shall apply coatings on any such coating line, during any day, whose daily-weighted average VOM content exceeds the emission limitation to which the coatings are subject.

b) No owner or operator of a miscellaneous metal parts and products coating line subject to the limitations of Section 218.204(j) of this ~~Part~~Subpart shall apply

coatings to miscellaneous metal parts or products on the subject coating line unless the requirements in subsection (b)(1) or (b)(2) ~~below~~of this Section are met.

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 218.204(j) during the same day (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used, or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 218.204(j) ~~above~~of this Subpart, during the same day, the owner or operator shall have a site-specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) 51 Fed. Reg. 43814 (December 4, 1986), must be satisfied.

c) No owner or operator of a can coating line subject to the limitations of Section 218.204(b) of this ~~Part~~Subpart shall operate the subject coating line using a coating with a VOM content in excess of the limitations specified in Section 218.204(b) of this ~~Part~~Subpart unless all of the following requirements are met:

1) An alternative daily emission limitation shall be determined for the can coating operation, i.e. for all of the can coating lines at the source, according to subsection (c)(2) ~~below~~of this Section. Actual daily emissions shall never exceed the alternative daily emission limitation and shall be calculated by use of the following equation.

$$E_d = \sum_{i=1}^{n} V_i \; C_i$$

where:

E_d = Actual VOM emissions for the day in units of kg/day (lbs/day);

i = Subscript denoting a specific coating applied;

n = Total number of coatings applied in the can coating operation, i.e. all can coating lines at the source;

V_i = Volume of each coating applied for the day in units of l/day (gal/day) of coating (minus water and any compounds which are specifically exempted from the definition of VOM);

C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM).

2) The alternative daily emission limitation (A_d) shall be determined for the can coating operation, i.e. for all of the can coating lines at the source, on a daily basis as follows:

$$A_d = \sum_{i=1}^{n} V_i \; L_i \; \left(D_i \; \frac{- C_i}{(D_i - L_i)}\right)$$

where:

A_d = The VOM emissions allowed for the day in units of kg/day (lbs/day);

i = Subscript denoting a specific coating applied;

n = Total number of surface coatings applied in the can coating operation;

C_i = The VOM content of each surface coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM);

D_i = The density of VOM in each coating applied. For the purposes of calculating A_d, the density is 0.882 kg VOM/l VOM (7.36 lbs VOM/gal VOM);

V_i = Volume of each surface coating applied for the day in units of l (gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM);

L_i = The VOM emission limitation for each surface coating applied as specified in Section 218.204(b) of this ~~Part~~Subpart in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM).

d) No owner or operator of a heavy off-highway vehicle products coating line subject to the limitations of Section 218.204(k) of this ~~Part~~Subpart shall apply coatings to heavy off-highway vehicle products on the subject coating line unless the requirements of subsection (d)(1) or (d)(2) ~~below~~of this Section are met.

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 218.204(k) ~~above~~of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used, or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 218.204(k) ~~above~~of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) 51 Fed. Reg. 43814 (December 4, 1986), must be satisfied.

e) No owner or operator of a wood furniture coating line subject to the limitations of Section 218.204(l) of this ~~Part~~Subpart shall apply coatings to wood furniture on the subject coating line unless the requirements of subsection (e)(1) or subsection (e)(2) ~~below~~of this Section, in addition to the requirements specified in the note to Section 218.204(l) of this ~~Part~~Subpart, are met.

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 218.204(l) ~~above~~of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.67 kg/l [5.6 lbs/gal]), the daily-weighted average VOM content shall not

exceed the coating VOM content limit corresponding to the category of coating used, or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 218.204(l) ~~above~~of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) 51 Fed. Reg. 43814 (December 4, 1986), must be satisfied.

f) No owner or operator of an existing diesel-electric locomotive coating line in Cook County, subject to the limitations of Section 218.204(m) of this ~~Part~~Subpart shall apply coatings to diesel-electric locomotives on the subject coating line unless the requirements of subsection (f)(1) or (f)(2) of this Section are met.

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 218.204(m) ~~above~~of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used, or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 218.204(m) ~~above~~of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) must be satisfied.

g) No owner or operator of a plastic parts coating line, subject to the limitations of Section 218.204(n) or (o) of this Subpart shall apply coatings to business machine or automotive/transportation plastic parts on the subject coating line unless the requirements of subsection (g)(1) or (g)(2) of this Section are met:

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 218.204(n) or (o) of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), the

daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used; or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 218.204(n) or (o) of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) must be satisfied.

h) No owner or operator of a metal furniture coating line, subject to the limitations of Section 218.204(g) of this Subpart shall apply coatings on the subject coating line unless the requirements of subsection (h)(1) or (h)(2) of this Section are met:

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 218.204(g) of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.34 kg/l [2.8 lbs/gal]), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used; or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 218.204(g) of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) must be satisfied.

i) No owner or operator of a large appliance coating line, subject to the limitations of Section 218.204(h) of this Subpart shall apply coatings on the subject coating line unless the requirements of subsection (i)(1) or (i)(2) of this Section are met:

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 218.204(h) of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.34 kg/l [2.8 lbs/gal]), the daily-weighted average VOM content shall not exceed the coating

VOM content limit corresponding to the category of coating used, or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 218.204(h) of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) must be satisfied.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

Section 218.207 Alternative Emission Limitations

a) Any owner or operator of a coating line subject to Section 218.204 of this ~~Part~~Subpart may comply with this Section, rather than with Section 218.204 of this ~~Part~~Subpart, if a capture system and control device are operated at all times the coating line is in operation and the owner or operator demonstrates compliance with subsection (c), (d), (e), (f), (g), ~~or~~ (h), (i), (j) or (k) of this Section (depending upon the source category) through the applicable coating analysis and capture system and control device efficiency test methods and procedures specified in Section 218.105 of this Part and the recordkeeping and reporting requirements specified in Section 218.211(e) of this ~~Part~~Subpart; and the control device is equipped with the applicable monitoring equipment specified in Section 218.105(d) of this Part and the monitoring equipment is installed, calibrated, operated and maintained according to vendor specifications at all times the control device is in use. A capture system and control device, which does not demonstrate compliance with subsection (c), (d), (e), (f), (g), ~~or~~ (h), (i), (j) or (k) of this Section may be used as an alternative to compliance with Section 218.204 of this ~~Part~~Subpart only if the alternative is approved by the Agency and approved by the USEPA as a SIP revision.

b) Alternative Add-On Control Methodologies

1) The coating line is equipped with a capture system and control device that provides 81 percent reduction in the overall emissions of VOM from the coating line and the control device has a 90 percent efficiency, or

2) The system used to control VOM from the coating line is demonstrated to have an overall efficiency

sufficient to limit VOM emissions to no more than what is allowed under Section 218.204 of this ~~Part~~Subpart. Use of any control system other than an afterburner, carbon adsorption, condensation, or absorption scrubber system can be allowed only if approved by the Agency and approved by the USEPA as a SIP revision. The use of transfer efficiency credits can be allowed only if approved by the Agency and approved by the USEPA as a SIP revision. Baseline transfer efficiencies and transfer efficiency test methods must be approved by the Agency and the USEPA.

Such overall efficiency is to be determined as follows:

A) Obtain the emission limitation from the appropriate subsection in Section 218.204 of this ~~Part~~Subpart;

B) Calculate "S" according to the equation in Section 218.206 of this ~~Part~~Subpart;

C) Calculate the overall efficiency required according to Section 218.105(e) of this Part. For the purposes of calculating this value, according to the equation in Section 218.105(e)(2) of this Part, VOM_i is equal to the value of "S" as determined above in subsection (b)(2)(B) of this Section.

c) No owner or operator of a coating line subject to only one of the emission limitations from among Section 218.204(a)(1), (a)(4), (c), (d), (e), (f), ~~(g), (h)~~ or (i) of this ~~Part~~Subpart and equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) ~~above~~of this Section are met. No owner or operator of a coating line subject to Section 218.204(a)(2) or 218.204(a)(3) and equipped with a capture system and control device shall operate the coating line unless the owner or operator demonstrates compliance with such limitation in accordance with the topcoat protocol referenced in Section 218.105(b).

d) No owner or operator of a miscellaneous metal parts and products coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(j) of this ~~Part~~Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), and which is equipped with a capture system and control device shall operate the subject coating

line unless the requirements in subsection (b)(1) or (b)(2) ~~above~~of this Section are met.

e) No owner or operator of a heavy off-highway vehicle products coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(k) of this ~~Part~~Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), and which is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) ~~above~~of this Section are met.

f) No owner or operator of an existing diesel-electric locomotive coating line in Cook County which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(m) of this ~~Part~~Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), and which is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) ~~above~~of this Section are met.

g) No owner or operator of a wood furniture coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(l) of this ~~Part~~Subpart (e.g., all coatings used on the line are subject to 0.67 kg/l [5.6 lbs/gal]), and which is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met. If compliance is achieved by meeting the requirements in subsection (b)(2) of this ~~Part~~Section, then the provisions in the note to Section 218.204(l) of this ~~Part~~Subpart must also be met.

h) No owner or operator of a can coating line which is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (h)(1) or (h)(2) ~~below~~of this Section are met.

1) An alternative daily emission limitation shall be determined for the can coating operation, i.e. for all of the can coating lines at the source, according to Section 218.205(c)(2) of this ~~Part~~Subpart. Actual daily emissions shall never exceed the alternative daily emission limitation and shall be calculated by use of the following equation:

$$E_d = \sum_{i=1}^{n} V_i \; C_i \; (1-F_i)$$

where:

E_d = Actual VOM emissions for the day in units of kg/day (lbs/day);

i = Subscript denoting the specific coating applied;

n = Total number of surface coatings as applied in the can coating operation;

V_i = Volume of each coating as applied for the day in units of l/day (gal/day) of coating (minus water and any compounds which are specifically exempted from the definition of VOM);

C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM) and

F_i = Fraction, by weight, of VOM emissions from the surface coating, reduced or prevented from being emitted to the ambient air. This is the overall efficiency of the capture system and control device.

2) The coating line is equipped with a capture system and control device that provide 75 percent reduction in the overall emissions of VOM from the coating line and the control device has a 90 percent efficiency.

i) No owner or operator of a plastic parts coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(n) or (o) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), and which is equipped with a capture system and control device, shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

j) No owner or operator of a metal furniture coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(g) of this Subpart (e.g., all coatings used on the line are subject to 0.34 kg/l [2.8 lbs/gal]), and which is equipped with a capture system and control device, shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

k) No owner or operator of a large appliance coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(h) of this Subpart (e.g., all coatings used on the line are subject to 0.34 kg/l [2.8 lbs/gal]), and which is equipped with a capture system and control device, shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

Section 218.208 Exemptions From Emission Limitations

a) Exemptions for all coating categories except wood furniture coating. The limitations of this Subpart shall not apply to coating lines within a source, that otherwise would be subject to the same subsection of Section 218.204 (because they belong to the same coating category, e.g. can coating) provided that combined actual emissions of VOM from all lines at the source subject to that subsection never exceed 6.8 kg/day (15 lbs/day) before the application of capture systems and control devices. (For example, can coating lines within a source would not be subject to the limitations of Section 218.204(b) of this ~~Part~~Subpart if the combined actual emissions of VOM from the can coating lines never exceed 6.8 kg/day (15 lbs/day) before the application of capture systems and control devices.) Volatile organic material emissions from heavy off-highway vehicle products coating lines must be combined with VOM emissions from miscellaneous metal parts and products coating lines to determine applicability. Any owner or operator of a coating source shall comply with the applicable coating analysis test methods and procedures specified in Section 218.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 218.211(a) of this ~~Part~~Subpart if total VOM emissions from the subject coating lines are always less than or equal to 6.8 kg/day (15 lbs/day) before the application of capture systems and control devices and, therefore, are not subject to the limitations of Section 218.204

of this ~~Part~~Subpart. Once a category of coating lines at a source is subject to the limitations in Section 218.204~~,~~ of this ~~Part~~Subpart the coating lines are always subject to the limitations in Section 218.204 of this ~~Part~~Subpart.

b) Applicability for wood furniture coating

1) The limitations of this Subpart shall apply to a source's wood furniture coating lines if the source contains process emission units, not regulated by Subparts B, E, F (excluding Section 218.204(l) of this ~~Part~~Subpart), H (excluding Section 218.405 of this Part), Q, R, S, T (excluding Section 218.486 of this Part), V, X, Y, or BB of this Part, which as a group both:

A) Have maximum theoretical emissions of 91 Mg (100 tons) or more per calendar year of VOM if no air pollution control equipment were used, and

B) Are not limited to less than 91 Mg (100 tons) of VOM per calendar year if no air pollution control equipment were used, through production or capacity limitations contained in a federally enforceable permit or SIP revision.

2) The limitations of this Subpart shall apply to a source's wood furniture coating lines, on and after March 15, 1996, if the source contains process emission units, which as a group, have a potential to emit 22.7 Mg (25 tons) or more of VOM per calendar year and have not limited emissions to less than 22.7 Mg (25 tons) of VOM per calendar year through production or capacity limitations contained in a federally enforceable operating permit or SIP revision, and which:

A) Are not regulated by Subparts B, E, F (excluding Section 218.204(l) of this Subpart), H, Q, R, S, T (excluding Section 218.486 of this Part), V, X, Y, Z or BB of this Part; and

B) Are not included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch

processing, volatile organic liquid storage tanks and clean-up solvents operations.

~~2~~3) If a source ceases to fulfill the criteria of subsection (b)(1) or (b)(2) of this Section, the limitations of Section 218.204(l) of this ~~Part~~Subpart shall continue to apply to any wood furniture coating line which was ever subject to the limitations of Section 218.204(l) of this ~~Part~~Subpart.

~~3~~4) For the purposes of subsection (b) of this Section, an emission unit shall be considered to be regulated by a Subpart if it is subject to the limitations of that Subpart. An emission unit is not considered regulated by a Subpart if it is not subject to the limits of that Subpart, e.g., the emission unit is covered by an exemption in the Subpart or the applicability criteria of the Subpart are not met.

~~4~~5) Any owner or operator of a wood furniture coating line to which the limitations of this Subpart are not applicable due to the criteria in subsection (b) of this Section shall, upon request by the Agency or the USEPA, submit records to the Agency and the USEPA within 30 calendar days from the date of the request that document that the coating line is exempt from the limitations of this Subpart.

c) On and after March 15, 1996, the limitations of this Subpart shall not apply to touch-up and repair coatings used by a coating source described by subsections 218.204(b), (d), (f), (g), (i), (j), (n) and (o) of this Subpart; provided that the source-wide volume of such coatings used does not exceed 0.95 l (1 quart) per eight-hour period or exceed 209 l/yr (55 gal/yr) for any rolling twelve month period. Recordkeeping and reporting for touch-up and repair coatings shall be consistent with Section 218.211(b)(4) of this Subpart.

d) On and after March 15, 1996, the owner or operator of a coating line or a group of coating lines using touch-up and repair coatings that are exempted from the limitations of Section 218.204(b), (d), (f), (g), (i), (j), (n) and (o) of this Subpart because of the provisions of Section 218.208(c) of this Subpart shall:

1) Collect and record the name, identification number, and volume used of each touch-up and repair coating, as applied on each coating line, per eight-hour period and per month;

2) Perform calculations on a daily basis, and maintain at the source records of such calculations of the combined volume of touch-up and repair coatings used source-wide for each eight-hour period;

3) Perform calculations on a monthly basis, and maintain at the source records of such calculations of the combined volume of touch-up and repair coatings used source-wide for the month and the rolling twelve month period;

4) Prepare and maintain at the source an annual summary of the information required to be compiled pursuant to subsections (c)(4)(A) and (c)(4)(B) of this Section on or before January 31 of the following year;

5) Maintain at the source for a minimum period of three years all records required to be kept under this subsection and make such records available to the Agency upon request;

6) Notify the Agency in writing if the use of touch-up and repair coatings at the source ever exceeds a volume of 0.95 1 (1 quart) per eight-hour period or exceeds 209 1/yr (55 gal/yr) for any rolling twelve month period within 30 days after any such exceedance. Such notification shall include a copy of any records of such exceedance; and

7) "Touch-up and repair coatings" means, for purposes of 35 Ill. Adm. Code 218.208, any coating used to cover minor scratches and nicks that occur during manufacturing and assembly processes.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

Section 218.210 Compliance Schedule

Every owner or operator of a coating line (of a type included within Section 218.204 of this Subpart) shall comply with the requirements of Section 218.204, 218.205, 218.207 or 218.208 and Section 218.211 ~~of this Part~~ or Sections 218.212 and 218.213 of this Subpart in accordance with the appropriate compliance schedule as specified in subsection (a), (b), (c), ~~or~~ (d) , (e) or (f) below:

a) No owner or operator of a coating line which is exempt from the limitations of Section 218.204 of this ~~Part~~Subpart because of the criteria in Section 218.208(a) of this ~~Part~~Subpart shall operate said coating line on or after a date consistent with Section

218.106 of this Part, unless the owner or operator has complied with, and continues to comply with, Section 218.211(b) of this ~~Part~~Subpart. Wood furniture coating lines are not subject to Section 218.211(b) of this ~~Part~~Subpart.

b) No owner or operator of a coating line complying by means of Section 218.204 of this ~~Part~~Subpart shall operate said coating line on or after a date consistent with Section 218.106 of this Part, unless the owner or operator has complied with, and continues to comply with, Sections 218.204 and 218.211(c) of this ~~Part~~Subpart.

c) No owner or operator of a coating line complying by means of Section 218.205 of this ~~Part~~Subpart shall operate said coating line on or after a date consistent with Section 218.106 of this Part, unless the owner or operator has complied with, and continues to comply with, Sections 218.205 and 218.211(d) of this ~~Part~~Subpart.

d) No owner or operator of a coating line complying by means of Section 218.207 of this ~~Part~~Subpart shall operate said coating line on or after a date consistent with Section 218.106 of this Part, unless the owner or operator has complied with, and continues to comply with, Sections 218.207 and 218.211(e) of this ~~Part~~Subpart.

e) No owner or operator of a coating line subject to one or more of the emission limitations contained in Section 218.204 of this Subpart on or after March 15, 1996, choosing to comply by means of Section 218.204, 218.205 or 218.207 of this Subpart, shall operate said coating line on or after March 15, 1996, unless the owner or operator complies with and continues to comply with, respectively, the applicable requirements in Section 218.204, or the alternative control options in Sections 218.205 or 218.207 and the requirements of Section 218.211.

f) No owner or operator of a coating line subject to one or more of the emission limitations contained in Section 218.204 of this Subpart on or after March 15, 1996, choosing to comply by means of Section 218.212 of this Subpart, shall operate said coating line on or after March 15, 1996, unless the owner or operator complies with and continues to comply with the requirements of Sections 218.212 and 218.213 of this Subpart.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

Section 218.212 Cross-Line Averaging to Establish Compliance for Coating Lines

a) On and after March 15, 1996, any owner or operator of a coating line subject to the limitations set forth in Section 218.204 of this Subpart, and with coating lines in operation prior to January 1, 1991 ("pre-existing coating lines"), may, for pre-existing coating lines only, elect to comply with the requirements of this Section, rather than complying with the applicable emission limitations set forth in Section 218.204, if an operational change of the type described below has been made after January 1, 1991, to one or more pre-existing coating lines at the source. An operational change occurs when a pre-existing coating line is replaced with a line using lower VOM coating for the same purpose as the replaced line ("replacement line"). A source electing to rely on this Section to demonstrate compliance with the requirements of this Subpart shall operate pursuant to federally enforceable permit conditions approved by the Agency and USEPA.

b) An owner or operator of pre-existing coating lines subject to a VOM content limitation in Section 218.204 of this Subpart and electing to rely on this Section to demonstrate compliance with this Subpart must establish, by use of the equations in subsection (d) of this Section, that the calculated actual daily VOM emissions from all participating coating lines, as defined below, are less than the calculated daily allowable VOM emissions from the same group of coating lines. For any pre-existing coating line to be aggregated for the purposes of Section 218.212, 218.213, or 218.214 of this Subpart ("participating coating lines"), the source must establish that:

1) All coatings applied on the participating coating line shall, at all times, have a VOM content less than or equal to the applicable VOM content limitation for such coating listed in Appendix H of this Part; and

2) On the date the source elects to rely on this Section to demonstrate compliance with this Subpart, all coatings applied on the participating coating line are not already in compliance with the VOM content limitation for such coating effective on or after March 15, 1996; or the participating coating line is a replacement line, as defined in subsection (a) of this Section with an operational change occurring on or after January 1, 1991.

c) Notwithstanding subsection (a) of this Section, any owner or operator of a coating line subject to the limitations set forth in Section 218.204 of this Subpart and electing to rely on this Section to demonstrate compliance with this Subpart, may also include as a participating coating line, until December 31, 1999, only, any replacement line that satisfies all of the following conditions:

1) The replacement line is operated as a powder coating line;

2) The replacement line was added after July 1, 1988; and

3) The owner or operator also includes as a participating coating line one or more coating lines that satisfy the criteria of a replacement line, as described in subsection (a) of this Section.

d) To demonstrate compliance with this Section, a source shall establish the following:

1) An alternative daily emission limitation shall be determined for all participating coating lines at the source according to subsection (d)(2) of this Section. All participating coating lines shall be factored in each day to demonstrate compliance. Provided compliance is established pursuant to the requirements in this subsection, nothing in this Section requires daily operation of each participating line. Actual daily emissions from all participating coating lines (E_d) shall never exceed the alternative daily emission limitation (A_d) and shall be calculated by use of the following equation:

$$E_d = \sum_{i=1}^{n} V_i \quad C_i$$

where:

E_d = Actual daily VOM emissions from participating coating lines in units of kg/day (lbs/day);

i = Subscript denoting a specific coating applied;

n = Total number of coatings applied by all participating coating lines at the source;

V_i = Volume of each coating applied for the day in units of l/day (gal/day) of coating (minus water and any compounds which are specifically exempted from the definition of VOM); and

C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM).

2) The alternative daily emission limitation (A_d) shall be determined for all participating coating lines at the source on a daily basis as follows:

$A_d = A_l + A_p$

where A_l and A_p are defined in subsections (2)(A) and (2)(B) of this Section.

A) The portion of the alternative daily emissions limitation for coating operations at a source using non-powder coating (A_l) shall be determined for all such participating non-powder coating lines on a daily basis as follows:

$$A_l = \sum_{i=1}^{n} V_i L_i \frac{(D_i - C_i)}{(D_i - L_i)}$$

where:

A_l = The VOM emissions allowed for the day in units of kg/day (lbs/day);

i = Subscript denoting a specific coating applied;

n = Total number of coatings applied in the participating coating lines;

C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM);

D_i = The density of VOM in each coating applied. For the purposes of calculating A_l, the density is 0.882 kg VOM/l VOM (7.36 lbs VOM/gal VOM);

V_i = Volume of each coating applied for the day in units of 1 (gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM); and

L_i = The VOM emission limitation for each coating applied, as specified in Section 218.204 of this Subpart, in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM).

B) The portion of the alternative daily emission limitation for coating operations at a source using powdered coating (A_p) shall be determined for all such participating powder coating lines at the source on a daily basis as follows:

$$A_p = \sum_{h=1}^{m} \sum_{j=1}^{n} \frac{V_j \quad L_j \quad D_j \quad K_h}{(D_j - L_j)}$$

where:

A_p = The VOM emissions allowed for the day in units of kg/day (lbs/day);

h = Subscript denoting a specific powder coating line;

j = Subscript denoting a specific powder coating applied;

m = Total number of participating powder coating lines;

n = Total number of powder coatings applied in the participating coating lines;

D_j = The assumed density of VOM in liquid coating, 0.882 kg VOM/l VOM (7.36 lbs VOM/gal VOM);

V_j = Volume of each powder coating consumed for the day in units of 1 (gal) of coating; and

L_j = The VOM emission limitation for each coating applied, as specified in Section 218.204 of this Subpart, in units of kg

VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM); and

K = A constant for each individual coating line representing the ratio of the volume of coating solids consumed on the liquid coating system which has been replaced to the volume of powder coating consumed on the replacement line to accomplish the same coating job. This value shall be determined by the source based on tests conducted and records maintained pursuant to the requirements of Section 218.213 of this Subpart demonstrating the amount of coating solids consumed as both liquid and powder. Test methods and recordkeeping requirements shall be approved by the Agency and USEPA and shall be contained in the source's operating permit as federally enforceable permit conditions, subject to the following restrictions:

i) K cannot exceed 0.9 for non-recycled powder coating systems; or

ii) K cannot exceed 2.0 for recycled powder coating systems.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 218.213 Recordkeeping and Reporting for Cross-Line Averaging Participating Coating Lines

Any owner or operator of a coating line that elects to comply by means of Section 218.212 of this Subpart shall establish the following:

a) By the date consistent with Section 218.210(f) of this Subpart, or upon initial start-up of a new coating line replacing a pre-existing coating line, as defined in Section 218.212 of this Subpart, or upon changing the method of compliance for a pre-existing coating line from the requirements of Section 218.204 or Section 218.207 of this Subpart to the requirements of Section 218.212 of this Subpart, the owner or operator of the source shall certify to the Agency that each participating coating line, as determined in accordance with Section 218.212 of this Subpart, will be in compliance with Section 218.212 of this Subpart on and after a date consistent with Section 218.210(f) of this

Subpart, or on and after the initial start-up date of such participating coating lines. Such certification shall also include:

1) The name and identification number of each participating coating line;

2) The name and identification number of each coating as applied on each participating coating line;

3) The weight of VOM per volume of each coating and the volume of each coating (minus water and any compounds which are specifically exempted form the definition of VOM) as applied each day on each participating coating line;

4) The instrument or method by which the owner or operator will accurately measure or calculate the volume of each coating as applied each day on each participating coating line;

5) The method by which the owner or operator will create and maintain records each day as required in subsection (b) of this Section;

6) An example of the format in which the records required in subsection (b) of this Section will be kept;

7) A statement that all coatings used on participating coating lines have a VOM content less than or equal to the applicable VOM limitation for such coating set forth within Appendix H of this Part, and that all lines either:

   A) Underwent a change in operations incorporating a lower VOM coating on each applicable participating coating line after the date of January 1, 1991; or

   B) Are not in compliance and continued compliance with the coating limitations in Section 218.204 of this Subpart, compliance with which is required on or after March 15, 1996.

8) The method by which the owner or operator has calculated K, for the equation contained in Section 218.212(d)(2)(B) of this Subpart, if applicable.

b) On and after a date consistent with Section 218.210(f) of this Subpart, or on and after the initial start-up

date, the owner or operator of a source electing to comply with the requirements of this Subpart by means of Section 218.212 of this Subpart shall collect and record the following information on a daily basis for each participating coating line and maintain the information at the source for a period of three years:

1) The name and identification number of each coating as applied on each participating coating line;

2) The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied on each participating coating line on a daily basis; and

3) The daily weighted average VOM content of all coatings as applied on each coating line as defined at 35 Ill. Adm. Code 211.1230.

c) On and after a date consistent with Section 218.210(f) of this Subpart, the owner or operator of participating coating lines shall:

1) Notify the Agency within 30 days following an occurrence of a violation of Section 218.212 of this Subpart; and

2) Send to the Agency any record showing a violation of Section 218.212 of this Subpart within 30 days following the occurrence of a violation.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 218.214 Changing Compliance Methods

a) At least 30 calendar days before changing the method of compliance with this Subpart from Section 218.212 of this Subpart to Section 218.204 or Section 218.207 of this Subpart, the owner or operator of a source relying on Section 218.212 to demonstrate compliance with this Subpart for one or more pre-existing coating lines shall comply with all requirements of Section 218.211 (c)(1) or (e)(1) of this Subpart, respectively.

b) Upon changing the method of compliance with this Subpart from Section 218.212 to Section 218.204 or Section 218.207 of this Subpart, the owner or operator of a source shall comply with the requirements of Section 218.211(c) or (e) of this Subpart, respectively.

c) The owner or operator shall certify that all remaining participating coating lines, if any, comply and continue to comply with the requirements of Section 218.212 of this Subpart.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

SUBPART Q: ~~LEAKS FROM~~ SYNTHETIC ORGANIC CHEMICAL AND POLYMER MANUFACTURING PLANT

Section 218.431 Applicability

a) The provisions of Sections 218.431 through 218.436 of this Subpart shall apply to:

1) Every owner or operator of any chemical manufacturing process unit that manufactures, as a primary product, one or more of the chemicals listed in Appendix A of this Part and that chemical manufacturing process unit causes or allows any reactor or distillation unit, either individually or in tandem, to discharge one or more process vent streams either directly to the atmosphere or to a recovery system; and

2) All continuous distillation and reactor process emission units not subject to Section 218.520 through 218.527 of this Part, and located within Stepan Company's Millsdale manufacturing facility, Elwood, Illinois.

b) Notwithstanding subsection (a) of this Section, the control requirements set forth within Section 218.432 of this Subpart shall not apply to the following:

1) Any process vent stream with a total resource effectiveness (TRE) index value greater than 1.0. However, such process vent stream remains subject to the performance testing requirements contained in Section 218.433 of this Subpart and the reporting and recordkeeping requirements contained in Section 218.435 of this Subpart;

2) Any reactor or distillation unit that is designed and operated as a batch operation;

3) Any reactor or distillation unit that is part of a polymer manufacturing operation;

4) Any reactor or distillation unit that is part of the chemical manufacturing process unit with a total design capacity of less than 1 gigagram

(1,100 tons) per year for all chemicals produced, as a primary product, within that process unit. However, such operations remain subject to the reporting and recordkeeping requirements contained in Section 218.435(d) of this Subpart;

5) Any vent stream with a flow rate less than 0.0085 scm/min or a total VOM concentration of less than 500 ppmv, less methane and ethane, as measured by Method 18, or a concentration of VOM of less than 250 ppmv as measured by Method 25A. However, such operations remain subject to the performance testing requirement listed in Section 218.433 of this Subpart, as well as the reporting and recordkeeping requirements contained in Section 218.435 of this Subpart; or

6) Any reactor or distillation unit included within an Early Reduction Program, as specified in 40 CFR 63, and published in 57 Fed. Reg. 61970 (October 22, 1993), evidenced by a timely enforceable commitment approved by USEPA.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 218.432 Control Requirements

a) Every owner or operator of a source subject to the requirements of this Subpart, as determined by Section 218.431 of this Subpart, shall either:

1) Reduce emissions of VOM, less methane or ethane, by 98 weight-percent, or to 20 ppmv, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent;

2) If a boiler or process heater is used to comply with this Subpart, the vent stream shall be introduced into the flame zone of the boiler or process heater; or

3) If a flare is used to comply with this Subpart, it shall comply with the requirements of 40 CFR 60.18, incorporated by reference at Section 218.112 of this Part. The flare operation requirements of 40 CFR 60.18 do not apply if a process, not subject to this Subpart, vents an emergency relief discharge into a common flare header and causes the flare servicing the process subject to this Subpart to not comply with one or more of the provisions of 40 CFR 60.18.

b) Notwithstanding subsection (a) or (c) of this Section, and subject to subsection (b)(2) of this Section:

1) No owner or operator of a source subject to Section 218.432 of this Subpart shall cause or allow VOM to be emitted through an existing control device unless the control device is operated to achieve:

A) 90 percent control of the VOM emissions vented to it; or

B) VOM emissions concentration of less than 50 ppmv, on a dry basis.

2) Any existing control device subject to subsection (a) of this Section is required to meet the 98 percent emissions limit set forth in subsection (a)(1) upon the earlier to occur of the date the control device is replaced for any reason, including, but not limited to, normal maintenance, malfunction, accident, and obsolescence, or December 31, 1999. A control device is considered to be replaced when:

A) All of the device is replaced; or

B) When the cost to repair the device or the cost to replace part of the device exceeds 50 percent of the cost of replacing the entire device with a device that complies with the 98% emissions limitation in subsection (a)(1) of this Section.

c) For each individual vent stream within a chemical manufacturing process unit with a TRE index value greater than 1.0, the owner or operator shall maintain process vent stream parameters that retain a calculated TRE index value greater than 1.0 by means of recovery. Any recovery device shall have as its primary purpose the capture of chemicals for use, reuse or sale. The TRE index value shall be calculated at the outlet of the final recovery device.

(Source: Added at ___ Ill. Reg. _____, effective _____ _____)

Section 218.433 Performance and Testing Requirements

a) For the purpose of demonstrating compliance with the TRE index value in Section 218.432(c) of this Subpart, an engineering assessment shall be made to determine process vent stream flow rate, net heating value, and VOM emission rate for the representative operating

conditions expected to yield the lowest TRE index value. The source shall also calculate the TRE index values pursuant to the equations contained within Appendix G (b)(1) of this Part.

1) If the TRE index value calculated using such engineering assessment and the TRE equation in Appendix G (b)(1) of this Part is greater than 4.0, then the owner or operator is exempt from performing the measurements specified in Appendix G (a) of this Part.

2) If the TRE index value calculated using such engineering assessment and the TRE equation in Appendix G (b)(1) of this Part is less than or equal to 4.0, then the owner or operator shall perform the measurements specified in Appendix G(a) of this Part. An owner or operator of a source may, in the alternative, elect to comply with the control requirements specified in Section 218.432 of this Subpart rather than performing the measurements in Appendix G(a) of this Part.

3) An engineering assessment shall include, but is not limited to, the following:

   A) Previous test results, provided the tests are representative of current operating practices at the chemical manufacturing process unit;

   B) Bench-scale or pilot-scale test data of the process under representative operating conditions;

   C) Maximum flow rate, as stated within a permit limit, applicable to the process vent;

   D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to, the following:

      i) Use of material balances based on process stoichiometry to estimate maximum VOM concentrations;

      ii) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities;

      iii) Estimation of VOM concentrations based on saturation conditions; and

iv) Estimation of maximum expected net heating value based on the stream concentration of each organic compound, or, alternatively, as if all VOM in the stream were the compound with the highest heating value.

E) All data, assumptions, and procedures used in the engineering assessment shall be documented.

b) For the purpose of demonstrating compliance with the control requirements in Section 218.432 of this Subpart, the chemical manufacturing process unit shall be run at representative operating conditions and flow rates during any performance test.

c) The following methods in 40 CFR 60, incorporated by reference at Section 218.112 of this Part, shall be used to demonstrate compliance with the reduction efficiency requirement listed in Section 218.432(a)(1) of this Subpart.

1) Method 1 or 1A, incorporated by reference at Section 218.112 of this Part, as appropriate, for selection of the sampling sites. The control device inlet sampling site for determination of vent stream molar composition or VOM content, less methane and ethane, reduction efficiency shall be located after the last recovery device but prior to the inlet of the control device, prior to any dilution of the process vent stream, and prior to release to the atmosphere.

2) Method 2, 2A, 2C or 2D, incorporated by reference at Section 218.112 of this Part, as appropriate, for determination of gas stream volumetric flow rate.

3) The emission rate correction factor, integrated sampling, and analysis procedure of Method 3, incorporated by reference at Section 218.112 of this Part, shall be used to determine the oxygen concentration ($\%O_{2d}$) for the purpose of determining compliance with the 20 ppmv limitation. The sampling site for determining compliance with the 20 ppmv limitation shall be the same site used for the VOM samples, and samples shall be taken at the same time that the VOM samples are taken. The VOM concentration corrected to 3 percent oxygen (C_c) shall be computed using the following formula:

$$C_c = C_{VOM} \times \frac{17.9}{}$$

$$\frac{20.9}{20.9 - \%O_{2d}}$$

where:

C_c = Concentration of VOM (minus methane and ethane) corrected to 3 percent O_2, dry basis, ppmv.

C_{VOM} = Concentration of VOM (minus methane and ethane), dry basis, ppmv

$\%O_{2d}$ = Concentration of oxygen, dry basis, percent by volume.

4) Method 18, incorporated by reference at Section 218.112 of this Part, to determine the concentration of VOM, less methane and ethane, at the outlet of the control device when determining compliance with the 20 ppmv limitation in Section 218.432(a)(1) of this Subpart, or at both the control device inlet and outlet when the reduction efficiency of the control device is to be determined.

A) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used then the samples shall be taken at 15-minute intervals.

B) The emission reduction (R) of VOM, less methane and ethane, shall be determined using the following formula:

$$R = \frac{(E_i - E_o)}{E_i} \times 100$$

where:

R = Emission reduction, percent by weight.

E_i = Mass rate of VOM (minus methane and ethane) entering the control device, kg VOM/hr.

E_o = Mass rate of VOM, less methane and ethane, discharged to the atmosphere, kg VOM/hr.

C) The mass rates of VOM (E_i, E_o) shall be computed using the following formula:

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij}\right) Q_i$$

$$E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj}\right) Q_o$$

where:

C_{ij}, C_{oj} = Concentration of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, dry basis, ppmv.

M_{ij}, M_{oj} = Molecular weight of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, grams per gram-mole.

Q_i, Q_o = Flow rate of gas stream at the inlet and outlet of the control device, respectively, dry scm/min.

K_2 = 2.494×10^{-6} (liters per minute)(gram-mole per scm)(kg/g)(min/hr), where standard temperature for (gram-mole per scm) is 20°C.

D) The representative VOM concentration (C_{VOM}) is the sum of each of the individual components of VOM (Cj) and shall be computed for each run using the following:

$$C_{VOM} = \sum_{j=1}^{n} C_j$$

where:

C_{VOM} = Concentration of VOM (minus methane and ethane), dry basis, ppmv.

C_j = Concentration of sample component "j", dry basis, ppmv.

n = Number of components in the sample.

5) When a boiler or process heater with a design heat input capacity of 44 megawatts or greater, or a boiler or process heater into which the process vent stream is introduced with the primary fuel, is used to comply with the control requirements, an initial performance test is not required.

d) When a flare is used to comply with the control requirements of this rule, the flare shall comply with the requirements of 40 CFR 60.18, incorporated by reference at Section 218.112 of this Part.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 218.434 Monitoring Requirements

a) The owner or operator of a source subject to the control requirements in Section 218.432 of this Subpart that uses an incinerator to comply with the VOM emission limitation specified in Section 218.432 (a)(1) shall install, calibrate, maintain, and operate, according to manufacturer's specifications, a temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature measured expressed in degrees Celsius, or ±0.5°C, whichever is greater.

1) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox.

2) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

b) The owner or operator of a source that uses a flare to comply with Section 218.432(a)(2) of this Subpart shall install, calibrate, maintain and operate, according to manufacturer's specifications, a heat-sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light to indicate continuous presence of a flame.

c) The owner or operator of a source that uses a boiler or process heater with a design heat input capacity less than 44 megawatts to comply with Section 218.432(a)(1) of this Subpart shall install, calibrate, maintain and operate, according to the manufacturer's specifications, a temperature monitoring device in the firebox. The monitoring device shall be equipped with a continuous recorder with an accuracy of ±1 percent of the temperature being measured expressed in degrees

Celsius or ±0.5°C, whichever is greater. Any boiler or process heater in which all vent streams are introduced with primary fuel is exempt from this requirement.

d) The owner or operator of a process vent with a TRE index value of 4.0 or less that uses one or more product recovery devices shall install either an organic monitoring device equipped with a continuous recorder or the monitoring equipment specified in subsections (d)(1), (d)(2), (d)(3) or (d)(4) of this Section, depending on the type of recovery device used. All monitoring equipment shall be installed, calibrated and maintained according to the manufacturer's specifications.

1) Where an absorber is the final recovery device in the recovery system, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each equipped with a continuous recorder, shall be used.

2) Where a condenser is the final recovery device in the recovery system, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±0.5°C, whichever is greater.

3) Where a carbon adsorber is the final recovery device in the recovery system, an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius of ±0.5°C, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle.

4) Where a scrubber is used with an incinerator, boiler, or, in the case of halogenated vent streams, a process heater, the following monitoring equipment is required for the scrubber:

A) A pH monitoring device equipped with a continuous recorder to monitor the pH of the scrubber effluent; and

B) Flow meters equipped with a continuous recorder at the scrubber influent for liquid

flow and the scrubber inlet for gas stream flow.

e) The owner or operator of a process vent using a vent system that contains bypass lines capable of diverting a vent stream away from the control device associated with a process vent shall comply with either (e)(1) or (e)(2) of this Section. Equipment needed for safety purposes, including, but not limited to, pressure relief devices, are not subject to this subsection.

1) The owner or operator shall install, calibrate, maintain and operate a flow indicator that provides a record of vent stream flow at least once every 15 minutes. The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.

2) The owner or operator shall secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

f) The owner or operator of a process vent may monitor by an equivalent alternative means or parameters other than those listed in subsections (a) through (d) of this Section. Any equivalent alternative shall be approved by the Agency and USEPA, and contained in the source's operating permit as federally enforceable permit conditions.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 218.435 Recordkeeping and Reporting Requirements

a) Every owner or operator of a reactor or distillation unit with a TRE index value of 4.0 or less shall keep records, for a minimum of 3 years, of the following parameters measured during a performance test or TRE determination required under Section 218.433 of this Subpart, and required to be monitored under Section 218.434 of this Subpart.

1) Every owner or operator of a source that seeks to demonstrate compliance with Section 218.432(a)(1) of this Subpart through the use of either a thermal or catalytic incinerator shall maintain records of the following:

A) The average firebox temperature of the incinerator (or the average temperature upstream and downstream of the catalyst bed for a catalytic incinerator), measured at least every 15 minutes and averaged over the same time period of the performance testing; and

B) The percent reduction of VOM determined as specified in Section 218.433(c) of this Subpart achieved by the incinerator, or the concentration of VOM (ppmv, by compound) determined as specified in Section 218.433(c) of this Subpart at the outlet of the control device, on a dry basis, corrected to 3 percent oxygen.

2) Every owner or operator of a source that seeks to demonstrate compliance with Section 218.432(a)(1) of this Subpart through the use of a boiler or process heater shall maintain the records described below. Any boiler or process heater in which all vent streams are introduced with primary fuel are exempt from these requirements.

A) A description of the location at which the vent stream is introduced into the boiler or process heater; and

B) The average combustion temperature of the boiler or process heater with a design heat input capacity of less than 44 megawatt measured at least every 15 minutes and averaged over the same time period of the performance testing.

3) Every owner or operator of a source that seeks to demonstrate compliance with Section 218.432(a)(2) of this Subpart through use of a smokeless flare, or flare design (i.e., steam-assisted, air-assisted, or nonassisted), shall maintain records of all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the performance test, continuous records of the flare pilot flame monitoring, and records of all periods of operations during which the pilot flame is absent.

4) Every owner or operator of a source that seeks to demonstrate compliance with Section 218.432(b) of this Subpart shall maintain records of the following:

A) Where an absorber is the final recovery device in the recovery system, the exit specific gravity (or alternative parameter which is a measure of the degree of absorbing liquid saturation, if approved by the Agency and USEPA, and average exit temperature of the absorbing liquid measured at least every 15 minutes and averaged over the same time period as the performance testing (both measured while the vent stream is normally routed and constituted);

B) Where a condenser is the final recovery device in the recovery system, the average exit (product side) temperature measured at least every 15 minutes and averaged over the same time period as the performance testing while the vent stream is normally routed and constituted;

C) Where a carbon adsorber is the final recovery device in the recovery system, the total stream mass or volumetric flow measured at least every 15 minutes and averaged over the same time period as the performance testing (full carbon bed cycle), the temperature of the carbon bed after regeneration (and within 15 minutes of completion of any cooling cycle(s)), and duration of the carbon bed steaming cycle (all measured while the vent stream is normally routed and constituted);

D) As an alternative to subsection (a)(4)(A), (a)(4)(B) or (a)(4)(C) of this Section, the concentration level or reading indicated by the organic monitoring device at the outlet of the absorber, condenser, or carbon absorber, measured at least every 15 minutes and averaged over the same time period as the performance testing (measured while the vent stream is normally routed and constituted); or

E) All measurements and calculations performed to determine the flow rate, VOM concentration, heating value, and TRE index value of the vent stream.

b) Every owner or operator of a reactor or distillation unit with a TRE index value of less than 4.0 shall be subject to the exceedance reporting requirements of the draft Enhanced Monitoring Guidelines as published at 58 Fed. Reg. 54648 (October 22, 1993).

c) Every owner or operator of a source seeking to comply with Section 218.432(b) of this Subpart shall maintain records of the following:

1) Any changes in production capacity, feedstock type, catalyst type, or of any replacement, removal, or addition of recovery equipment or reactors and distillation units; and

2) Any recalculation of the flow rate, VOM concentration, or TRE index value calculated according to Section (c) of Appendix G of this Part.

d) Every owner or operator of a source claiming a design capacity of less than 1 gigagram (1,100 tons) per year, as contained in Section 218.431(b) of this Subpart, shall maintain records of the design capacity or any changes in equipment or operations that may affect the design capacity.

e) Every owner or operator of a source claiming a vent stream flow rate or vent stream concentration exemption level, as contained in Section 218.431(b)(5) of this Subpart, shall maintain records to indicate that the stream flow rate is less than 0.0085 scm/min or the vent stream concentration is less than 500 ppmv.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 218.436 Compliance Date

Every owner or operator of an source subject to Sections 218.431, 218.432, 218.433, 218.434 or 218.435 of this Subpart shall comply with its standards, limitations and mandates by March 15, 1996.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

SUBPART DD: AEROSOL CAN FILLING

Section 218.686 Control Requirements

a) Every owner or operator of an aerosol can filling line that is filling cans with a propellant which contains propane, butane or other VOM subject to this Subpart shall comply with the following requirements:

1) Emission capture and control techniques which achieve an overall reduction in uncontrolled VOM emission of at least 81% from the propellant filling area, also known as the gas house, on each line; or

2) As an alternative to compliance with subsection (a)(1) ~~above~~of this Subpart, the owner or operator of an aerosol can filing line~~,~~ shall comply with the following requirements:

A) Fill all cans, other than trial runs of cans to verify product quality, using through-the-valve fill or enhanced under-the-cup fill to minimize loss of VOM propellant; or use a reclamation system to recover surplus VOM propellant or use another system approved in a federally enforceable permit which achieves at least 75% reduction of the emissions of under-the-cup fill;

B) Fill on a monthly basis at least 90% of cans filled on such aerosol can filling lines that are capable of being filled by the through-the-valve method with through-the-valve fill. All cans shall be considered capable of being filled by the through-the-valve method unless, as demonstrated by the records required by Section 218.692(b)(2) of this Part, the valve assembly is not adaptable to the through-the-valve fill; through-the-valve fill cannot be accomplished with at least 85% of the under-the-cup operating rate in cans per minute of filling; ~~and~~or performance, that is the discharge of the can's contents to accomplish its intended function, is negatively affected by through-the-valve fill considering factors such as propellant solubility in the can's contents and the amount of turbulence which the contents may experience during propellant filling; and

C) Verify proper filling of cans with a VOM monitoring system in the gas house. This system may monitor VOM concentration as a percentage of the lower explosive limit.

b) Every owner or operator of a propellant booster pump associated with an aerosol can filling line subject to this Subpart shall comply with one of the following requirements:

1) Emission capture and control techniques which achieve an overall reduction in uncontrolled VOM emission of at least 81% from each pump. If the pumps are located in the gas house of a filling line, compliance with this reduction may be achieved by the combination of the pumps located

in the gas house and the propellant filling area; or

2) Work practices to prevent leaks from a pump, meaning a loss of VOM from the pump above background levels. Work practices shall include changing seals every four (4) weeks and plungers every 16 weeks unless a pump monitoring procedure approved in a federally enforceable permit establishes otherwise.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

SUBPART FF: BAKERY OVENS

Section 218.720 Applicability

a) The provisions of this Subpart shall apply to every owner or operator of a source which operates a bakery oven, as defined at 35 Ill. Adm. Code 211.680, unless the source bakes products only for on-site human consumption or on-site retail sale.

b) Notwithstanding subsection (a) of this Section, a source is required to comply with the control requirements of this Subpart only if the source has the potential to emit 22.7 Mg (25 tons) or more of VOM per year, in the aggregate, from all emission units at the source, excluding:

1) Emission units regulated by Subparts B, E, F, H, O, R, S, T (excluding Section 218.486 of this Part), V, X, Y, Z or BB of this Part; and

2) Emission units that are included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture coating, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.

c) Every owner or operator of a source which has limited its potential to emit below 22.7 Mg (25 tons) of VOM per year, as specified in subsection (b) of this Section, through federally enforceable permit conditions is not required to comply with this Subpart.

d) Every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart because of the criteria in subsection (b) of this

Section remains subject to the recordkeeping and reporting requirements of Section 218.728(b) of this Subpart and the certification requirements in Section 218.730(d) of this Subpart.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 218.722 Control Requirements

a) Every owner or operator of a source subject to the control requirements of this Subpart shall comply with the requirements of subsection (a)(1) or (a)(2) of this Section for each bakery oven with a rated heat input capacity of at least 2 mmbtu/hr or at least 586 kW:

1) Operate emissions capture and control equipment which achieves an overall reduction in uncontrolled VOM emissions of at least 81 percent from each such bakery oven; or

2) Provide an equivalent alternative control plan for such bakery ovens at the source which has been approved by the Agency and USEPA through federally enforceable permit conditions or as a SIP revision.

b) An owner or operator of a source subject to the control requirements of this Subpart may elect to exempt from the control requirements in subsections (a)(1) or (a)(2) and (c)(1) or (c)(2) of this Section any bakery oven with actual VOM emissions less than or equal to 15 TPY; provided that the total actual VOM emissions from all such exempt bakery ovens never exceeds 25 TPY.

c) Notwithstanding the requirements in subsection (a) of this Section, until March 15, 1998 only, a source may elect to comply with the control requirements in subsection (c)(1) or (c)(2) of this Section, rather than the control requirements in subsection (a)(1) or (a)(2) of this Section, if all emission units at the source, in the aggregate, excluding emission units regulated by Subparts B, E, F, H (excluding Section 218.405 of this Subpart), Q, R, S, T (excluding Section 218.486 of this Subpart), V, X, Y, Z or BB of this Subpart, have maximum theoretical emissions of less than 90.7 Mg (100 tons) of VOM per year or are limited to less than 90.7 Mg (100 tons) of VOM emissions per calendar year in the absence of air pollution control equipment through production or capacity limitations contained in federally enforceable permit conditions or in a SIP revision:

1) Operate emissions capture and control equipment which achieves an overall reduction in uncontrolled VOM emissions of at least 60 percent from each bakery oven with a rated heat input capacity of at least 2 mmbtu/hr or at least 586 KW; or

2) Provide an equivalent alternative control plan for such bakery ovens at the source which has been approved by the Agency and USEPA through federally enforceable permit conditions or as a SIP revision.

d) Any bakery oven that becomes subject to the requirements of this Subpart at any time shall remain subject to the requirements of this Subpart at all times thereafter.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 218.726 Testing

a) Upon request by the Agency, the owner or operator of a bakery oven shall, at its own expense, conduct such tests in accordance with the applicable test methods and procedures specified in Section 218.105(f) of this Part to demonstrate compliance with the control requirements of this Subpart and shall:

1) Notify the Agency 30 days prior to conducting such tests; and

2) Submit all test results to the Agency within 45 days after conducting such tests.

b) Nothing in this Section shall limit the authority of USEPA pursuant to the Clean Air Act (CAA) to require testing, or shall affect the authority of USEPA under Section 114 of the CAA (42 U.S.C. 7414 (1990)).

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 218.727 Monitoring

a) Every owner or operator of a bakery oven subject to the control requirements of this Subpart shall install and operate at all times a device to continuously monitor the following parameters for each type of control device as follows:

1) For catalytic oxidizers, the inlet and outlet temperatures of the oxidizer;

2) For regenerative oxidizers, the temperature in the combustion chamber; or

3) For thermal incinerators, the temperature in the combustion chamber.

b) The owner or operator may monitor with an alternative method or monitor other parameters if approved by the Agency and USEPA through federally enforceable permit conditions or as a SIP revision.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 218.728 Recordkeeping and Reporting

a) Every owner or operator of a bakery oven shall maintain the following records for the most recent consecutive 3 year period for all bakery ovens subject to the control requirements of this Subpart. Such records shall be made available to the Agency immediately upon request.

1) Parameters for control devices as monitored pursuant to Section 218.727 of this Subpart;

2) Hrs/day of operation of each bakery oven;

3) Factors necessary to calculate VOM emissions for all bakery ovens including, but not limited to, type of dough used for each yeast-leavened baked product, initial yeast percentage for each product, total fermentation time for each product, any additional percentage of yeast added, and the fermentation time of any additional yeast;

4) Calculated daily VOM emissions of each bakery oven expressed as lbs/day;

5) Total amount of each type of yeast-leavened bread product produced by each bakery oven expressed as lbs/day.

b) Every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart because of the criteria in Section 218.720(b) of this Subpart shall maintain records necessary to demonstrate that its potential to emit is less than 22.7 Mg (25 tons)of VOM per year, as specified in Section 218.720(b). Such records shall be maintained for the most recent consecutive 3 year period and shall be made available to the Agency immediately upon request.

c) Every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart

because of the criteria specified in Section 218.722(b) of this Subpart shall:

1) Maintain records necessary to demonstrate that the actual VOM emissions from exempt bakery ovens are less than or equal to 15 TPY for each bakery oven and less than or equal to 25 TPY from all exempt bakery ovens combined. Such records shall be maintained for the most recent consecutive 3 year period and shall be made available to the Agency immediately upon request; and

2) Notify the Agency in writing if the actual VOM emissions from an exempt bakery oven ever exceed 15 TPY or the actual VOM emissions from a combination of exempt bakery ovens ever exceed 25 TPY, within 30 days after the exceedance occurs. Such notice shall include a copy of all records of the exceedance.

d) Every owner or operator of a bakery oven which is controlling emissions as provided in Section 218.722(c) of this Subpart until March 15, 1998, shall maintain records necessary to demonstrate that its maximum theoretical emissions as specified in Section 218.722(c) are less than 90.7 Mg (100 tons) of VOM per year. Such records shall be maintained for the most recent consecutive 3 year period and shall be made available to the Agency immediately upon request.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 218.729 Compliance Date

On and after March 15, 1996, upon initial startup or upon modification, every owner or operator of a source subject to this Subpart shall comply with the requirements of this Subpart.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 218.730 Certification

a) Every owner or operator of a source subject to the control requirements of this Subpart shall certify compliance with this Subpart on or before a date consistent with Section 218.729 of this Subpart.

b) If an owner or operator of a bakery oven subject to the control requirements of this Subpart changes the method of compliance, the owner or operator shall certify compliance with the requirements of this Subpart for

the alternative method upon changing the method of compliance.

c) All certifications of compliance with this Subpart shall include the results of all tests and the calculations performed to demonstrate that each oven at the source is in compliance with, or is exempt from, the control requirements of this Subpart. The certification shall include the following:

1) The name and identification number of each oven and any associated capture and control device;

2) The maximum rated heat input of each oven;

3) A classification of each oven as either a "bakery oven" as defined in 35 Ill. Adm. Code 211.680 or an oven used exclusively to bake non-yeast-leavened products;

4) The capture and control efficiency of each bakery oven control device;

5) Test reports, calculations and other data necessary to demonstrate that the capture and control efficiency of each bakery oven control device achieves an overall reduction in uncontrolled VOM emissions of at least 81 percent; and

6) The date each bakery oven control device was installed and operating.

d) On or before March 15, 1996, or upon initial startup, every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart because of the criteria in Section 218.720(b) of this Subpart shall certify that its potential to emit is less than 22.7 Mg (25 tons) of VOM per year, as specified in Section 218.720(b).

e) On or before March 15, 1996, or upon initial startup, every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart because of the criteria specified in Section 218.722(b) of this Subpart shall certify that actual VOM emissions from any individual exempt bakery oven never exceed 15 TPY and that VOM emissions from all exempt bakery ovens, in the aggregate, never exceed 25 TPY.

f) On or before March 15, 1996, or upon initial startup if prior to March 15, 1998, every owner or operator of a bakery oven which is controlling emissions as provided by Section 218.722(c) of this Subpart, shall certify

that its maximum theoretical emissions as specified in Section 218.722(c) are less than 90.7 Mg (100 tons) of VOM per year.

(Source: Added at _____ Ill. Reg. _____, effective _____)

SUBPART RR: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING PROCESS

Section 218.966 Control Requirements

Every owner or operator of a miscellaneous organic chemical manufacturing process emission unit subject to this Subpart shall comply with the requirements of subsection (a), (b), or (c) ~~below~~ of this Section.

a) Emission capture and control techniques which achieve an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit, or

(Board Note: For the purpose of this provision, an emission unit is any part or activity at a source of a type that by itself is subject to control requirements in other Subparts of this Part or 40 CFR 60, incorporated by reference in Section 218.112, e.g., a coating line, a printing line, a process unit, a wastewater system, or other equipment, or is otherwise any part or activity at a source.)

b) An equivalent alternative control plan which has been approved by the Agency and USEPA in a federally enforceable permit or as a SIP revision.

c) Any leaks from components subject to the control requirements of this Subpart shall be subject to the following control measures by March 15, 1995:

1) Repair any component from which a leak of VOL can be observed. The repair shall be completed as soon as practicable but no later than 15 days after the leak is found, unless the leaking component cannot be repaired until the process unit is shut down, in which case the leaking component must be repaired before the unit is restarted.

2) For any leak which cannot be readily repaired within one hour after detection, the following records, as set forth in this subsection, shall be kept. These records shall be maintained by the owner or operator for a minimum of two years after the date on which they are made. Copies of the

records shall be made available to the Agency or USEPA upon verbal or written request.

A) The name and identification of the leaking component;

B) The date and time the leak is detected;

C) The action taken to repair the leak; and

D) The date and time the leak is repaired.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

SUBPART TT: OTHER EMISSION UNITS

Section 218.980 Applicability

a) Maximum theoretical emissions:

1) A source is subject to this Subpart if it contains process emission units not regulated by Subparts B, E, F (excluding Section 218.204(l) of this Part), H (excluding Section 218.405 of this Part), Q, R, S, T (excluding Section 218.486 of this Part), V, X, Y, Z or BB of this Part, which as a group both:

A) Have maximum theoretical emissions of 90.7 Mg (100 tons) or more per calendar year of VOM, and

B) Are not limited to less than 90.7 Mg (100 tons) of VOM emissions per calendar year in the absence of air pollution control equipment through production or capacity limitations contained in a federally enforceable permit or a SIP revision.

2) If a source is subject to this Subpart as provided ~~above~~in this Subpart, the requirements of this Subpart shall apply to a source's VOM emission units which are not included within any of the categories specified in Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z, AA, BB, PP, QQ, or RR of this Part or which are not exempted from permitting requirements pursuant to 35 Ill. Adm. Code 201.146.

b) Potential to emit:

1) A source is subject to this Subpart if it has the potential to emit 22.7 Mg (25 tons) or more of VOM

per year, in aggregate, from emission units, other than furnaces at glass container manufacturing sources and VOM leaks from components, that are:

A) Not regulated by Subparts B, E, F, H, Q, R, S, T, (excluding Section 218.486 of this Part), V, X, Y, Z, or BB of this Part, or

B) Not included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.

2) If a source is subject to this Subpart as provided above, the requirements of this Subpart shall apply to a source's VOM emission units, which are:

A) Not included within any of the categories specified in Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z, AA, BB, CC, DD, PP, QQ or RR of this Part, or which are not exempted from permitting requirements pursuant to 35 Ill. Adm. Code 201.146 (excluding Section 201.146(o) and (p)), or

B) Not included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.

c) If a source ceases to fulfill the criteria of subsection (a) and/or (b) ~~above~~of this Section, the requirements of this Subpart shall continue to apply to an emission unit which was ever subject to the control requirements of Section 219.986 of this Part.

d) No limits under this Subpart shall apply to emission units with emissions of VOM to the atmosphere less than or equal to 2.3 Mg (2.5 tons) per calendar year if the total emissions from such emission units not complying with Section 219.986 of this Part does not exceed 4.5 Mg (5.0 tons) per calendar year.

e) For the purposes of this Subpart, an emission unit shall be considered regulated by a Subpart, if it is subject to the limits of that Subpart. An emission unit is considered not regulated by a Subpart if it is not subject to the limits of that Subpart, e.g., the emission unit is covered by an exemption in the Subpart or the applicability criteria of the Subpart are not met.

f) The control requirements in Subpart TT shall not apply to sewage treatment plants; vegetable oil extraction and processing; coke ovens (including by-product recovery plants); fuel combustion units; bakeries; barge loading facilities; jet engine test cells; production of polystyrene foam insulation board including storage and extrusion of scrap where blowing agent is added to the polystyrene resin at the source, but not including blending and preliminary expansion of resin prior to molding where blowing agent is incorporated into the polystyrene resin by the producer of the resin; production of polystyrene or polyethylene foam packaging not including blending and preliminary expansion of resin prior to molding where blowing agent is incorporated into the polystyrene resin by the producer of the resin, and not including storage and extrusion of scrap where blowing agent is added to the polystyrene resin at the source; iron and steel production; and furnaces at glass container manufacturing sources.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

Section 218.Appendix G TRE Index Measurements for SOCMI Reactors and Distillation Units

For purposes of Subpart Q, Sections 218.431 through 218.435, the following apply:

a) The following test methods shall be used to determine compliance with the total resource effectiveness ("TRE") index value:

1 1) Method 1 or 1A, incorporated by reference at Section 218.112 of this Part, as appropriate, for selection of the sampling site.

A) The sampling site for the vent stream molar composition determination and flow rate prescribed in subsections (a)(2) and (a)(3) of this Appendix shall be, except for the situations outlined in subsection (a)(1)(B), after the final recovery device, if a recovery system is present, prior to the

inlet of any control device, and prior to any post-reactor or post-distillation unit introduction of halogenated compounds into the vent stream. No traverse site selection method is needed for vents smaller than 10 cm in diameter.

B) If any gas stream other than the reactor or distillation unit vent stream is normally conducted through the final recovery device:

i) The sampling site for vent stream flow rate and molar composition shall be prior to the final recovery device and prior to the point at which any nonreactor or nondistillation unit vent stream or stream from a nonaffected reactor or distillation unit is introduced. Method 18 incorporated by reference at Section 218.112 of this Part, shall be used to measure organic compound concentrations at this site.

ii) The efficiency of the final recovery device is determined by measuring the organic compound concentrations using Method 18, incorporated by reference at Section 218.112 of this Part, at the inlet to the final recovery device after the introduction of all vent streams and at the outlet of the final recovery device.

iii) The efficiency of the final recovery device determined according to subsection (a)(1)(B)(ii) of this Appendix shall be applied to the organic compound concentrations measured according to subsection (a)(1)(B)(i) of this Appendix to determine the concentrations of organic compounds from the final recovery device attributable to the reactor or distillation unit vent stream. The resulting organic compound concentrations are then used to perform the calculations outlined in subsection (a)(4) of this Appendix.

2) The molar composition of the vent stream shall be determined as follows:

A) Method 18, incorporated by reference at Section 218.112 of this Part, to measure the

concentration of organic compounds including those containing halogens;

B) ASTM D1946-77, incorporated by reference at Section 218.112 of this Part, to measure the concentration of carbon monoxide and hydrogen; and

C) Method 4, incorporated by reference at Section 218.112 of this Part, to measure the content of water vapor.

3) The volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D, incorporated by reference at Section 218.112 of this Part, as appropriate.

4) The emission rate of VOM (minus methane and ethane) (E_{VOM}) in the vent stream shall be calculated using the following formula:

$$E_{VOM} = K_2 \sum_{j=1}^{n} C_j M_j Q_s$$

where:

E_{VOM} = Emission rate of VOM (minus methane and ethane) in the sample, kg/hr.

K_2 = Constant, 2.494×10^{-6} (l/ppmv)(g-mole/scm)(kg/g)(min/hr), where standard temperature for (g-mole/scm) is 20°C.

C_j = Concentration of compound j, on a dry basis, in ppmv as measured by Method 18, incorporated by reference at Section 218.112 of this Part, as indicated in Section 218.433(c)(3) of this Part.

M_j = Molecular weight of sample j, g/g-mole.

Q_s = Vent stream flow rate (scm) at a temperature of 20°C.

5) The total vent stream concentration (by volume) of compounds containing halogens (ppmv, by compound) shall be summed from the individual concentrations of compounds containing halogens which were measured by Method 18, incorporated by reference at Section 218.112 of this Part.

6) The net heating value of the vent stream shall be calculated using the following:

$$H_T = K_1 \sum_{j=1}^{n} C_j H_j (1-B_{ws})$$

where:

H_T = Net heating value of the sample (MJ/scm), where the net enthaply per mole of vent stream is based on combustion of 25°C and 760 mmHG, but the standard temperature for determining the volume corresponding to one mole is 25°C, as in the definition of Q_s (vent stream flow rate).

K_1 = Constant, 1.740×10^{-7} $(ppmv)^{-1}$ (g-mole/scm), (MJ/KCal), where standard temperature for (g-mole/scm) is 20°C.

B_{ws} = Water vapor content of the vent stream, proportion by volume; except that if the vent stream passes through a final stream jet and is not condensed, it shall be assumed that $B_{ws} = 0.023$ in order to correct to 2.3 percent moisture.

C_j = Concentration on a dry basis of compound j in ppmv, as measured for all organic compounds by Method 18, incorporated by reference at Section 218.112 of this Part, and measured for hydrogen and carbon monoxide by using ASTM D1946-77, incorporated by reference at Section 218.112 of this Part.

H_j = Net heat of combustion of compound j, kCal/g-mole, based on combustion at 25°C and 760 mmHG. The heats of combustion of vent stream components shall be determined using ASTM D2382-83, incorporated by reference at Section 218.112 of this Part, if published values are not available or cannot be calculated.

b) 1) The TRE index value of the vent shall be calculated using the following:

$$TRE = \frac{1}{E_{VOM}} [a + b (Q_s) + c (H_T) + d (E_{VOM})]$$

where:

TRE = TRE index value.

E_{VOM} = Hourly emission rate of VOM (kg/hr) as calculated in subsection (a)(4) of this Appendix.

Q_s = Vent stream flow rate scm/min at a standard temperature of 20°C.

H_T = Vent stream net heating value (MJ/scm), as calculated in subsection (a)(6) of this Appendix.

E_{VOM} = Hourly emission rate of VOM (minus methane and ethane), (kg/hr) as calculated in subsection (a)(4) of this Appendix.

a,b, c,d = Value of coefficients presented below are:

Type of Stream	Control Device Basis	Value of Coefficients a	b	c	d
Nonhalogenated	Flare	2.129	0.183	-0.005	0.359
	Thermal incinerator zero (0) Percent heat Recovery	3.075	0.021	-0.037	0.01
	Thermal incinerator 70 Percent heat Recovery	3.803	0.032	-0.042	0.007
Halogenated	Thermal incinerator and scrubber	5.470	0.181	-0.040	0.004

2) Every owner or operator of a vent stream shall use the applicable coefficients identified for values a, b, c and d in subsection (b)(1) of this Appendix to calculate the TRE index value based on a flare, a thermal incinerator with zero percent heat recovery, and a thermal incinerator with 70 percent heat recovery, and shall select the lowest TRE index value.

3) Every owner or operator of a reactor or distillation unit with a halogenated vent stream, determined as any stream with a total concentration of halogen atoms contained in organic compounds of 200 ppmv or greater, shall use the applicable coefficients identified for values a, b, c and d in subsection (b)(1) of this

Appendix to calculate the TRE index value based on a thermal incinerator and scrubber.

c) Every owner or operator of a source seeking to comply with Section 218.432(b) of this Part shall recalculate the flow rate and VOM concentration for each affected vent stream whenever process changes are made. Examples of process changes include, but are not limited to, changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. The flow rate and VOM concentration shall be recalculated based on test data, or on best engineering estimates of the effects of the change to the recovery system.

d) Whenever a process change, as defined in Section 218.435(c) of this Subpart, yields a TRE index value of 1.0 or less, the owner or operator shall notify and submit a report to the Agency according to the requirements specified in Section 218.435(c) of this Subpart, within 180 calendar days after the process change and shall conduct a performance test according to the methods and procedures required by Section 218.433 of this Part.

e) For the purpose of demonstrating that a process vent stream has a VOM concentration below 500 ppmv, the following shall be used:

1) The sampling site shall be selected as specified in Section 218.433(c)(1) of this Part.

2) Method 18 or Method 25A of 40 CFR Part 60, Appendix A, incorporated by reference at Section 218.112 of this Part, shall be used to measure concentration; alternatively, any other method or data that has been validated according to the protocol in Method 301 of 40 CFR Part 63, Appendix A, incorporated by reference at Section 218.112 of this Part, may be used.

3) Where Method 18 is used, the following procedures shall be used to calculate ppmv concentration:

i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

ii) The concentration of VOM shall be calculated using Method 18 according to Section 218.433(c)(4) of this Part.

4) Where Method 25A is used, the following procedures shall be used to calculate ppmv VOM concentration:

i) Method 25A shall be used only if a single VOM is greater than 50 percent of total VOM, by volume, in the process vent stream.

ii) The vent stream composition may be determined by either process knowledge, test data collected using an appropriate Reference Method or a method of data collection validated according to the protocol in Method 301 of 40 CFR Part 63, Appendix A, incorporated by reference at Section 218.112 of this Part. Examples of information that constitute process knowledge include calculations based on material balances, process stoichiometry, or previous test results provided the results are still relevant to the current process vent stream conditions.

iii) The VOM used as the calibration gas for Method 25A shall be the single VOM present at greater than 50 percent of the total VOM by volume.

iv) The span value for Method 25A shall be 50 ppmv.

v) Use of Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

vi) The concentration of VOM shall be corrected to 3 percent oxygen using the procedures and equation in Section 218.433(c)(3) of this Part.

5) The owner or operator shall demonstrate that the concentration of VOM, including methane and ethane, measured by Method 25A is below 250 ppmv to qualify for the low concentration exclusion in Section 218.431 of this Part.

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

Section 218.Appendix H Baseline VOM Content Limitations for Subpart F, Section 218.212 Cross-Line Averaging

This Appendix contains limitations for purposes of determining compliance with the requirements in Section 218.212 of this Part. A source must establish that, at very least, each participating coating line used for purposes of cross-line averaging meets the Federal Implementation Plan level of VOM content, as listed below. The emission limitations for participating coating lines that must not be exceeded are as follows:

		kg/l	lb/gal
a)	Automobile or Light-Duty Truck Coating		
1)	Prime coat	0.14	(1.2)
2)	Primer surface coat	1.81	(15.1)

(Note: The primer surface coat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire primer surface operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b) and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 does not apply to the primer surface limitation.)

		kg/l	lb/gal
3)	Topcoat	1.81	(15.1)

(Note: The topcoat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire topcoat operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b) of this Part and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol.

Section 218.205 of this Part does not apply to the topcoat limitation.)

		kg/l	lb/gal
4)	Final repair coat	0.58	(4.8)

		kg/l	lb/gal
b)	Can Coating		
1)	Sheet basecoat and overvarnish	0.34	(2.8)
2)	Exterior basecoat and overvarnish	0.34	(2.8)
3)	Interior body spray coat	0.51	(4.2)
4)	Exterior end coat	0.51	(4.2)
5)	Side seam spray coat	0.66	(5.5)
6)	End sealing compound coat	0.44	(3.7)

		kg/l	lb/gal
c)	Paper Coating	0.35	(2.9)

(Note: The paper coating limitation shall not apply to any owner or operator of any paper coating line on which printing is performed if the paper coating line complies with the emissions limitations in Subpart H: Printing and Publishing, Section 218.401 of this Part.)

		kg/l	lb/gal
d)	Coil Coating	0.31	(2.6)
e)	Fabric Coating	0.35	(2.9)
f)	Vinyl Coating	0.45	(3.8)
g)	Metal Furniture Coating		
1)	Air Dried	0.36	(3.0)
2)	Baked	0.36	(3.0)
h)	Large Appliance Coating		
1)	Air Dried	0.34	(2.8)
2)	Baked	0.34	(2.8)

(Note: The limitation shall not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of

coating does not exceed 0.95 l (1 quart) in any one rolling eight-hour period.)

		kg/l	lb/gal
i)	Magnet Wire Coating	0.20	(1.7)
j)	Miscellaneous Metal Parts and Products Coating		
	1) Clear coating	0.52	(4.3)
	2) Extreme performance coating		
	A) Air Dried	0.42	(3.5)
	B) Baked	0.42	(3.5)
	3) Steel pail and drum interior coating	0.52	(4.3)
	4) All other coatings		
	A) Air Dried	0.42	(3.5)
	B) Baked	0.36	(3.0)

		kg/l	lb/gal
k)	Heavy Off-Highway Vehicle Products Coating		
	1) Extreme performance prime coat	0.42	(3.5)
	2) Extreme performance top-coat (air dried)	0.42	(3.5)
	3) Final repair coat (air dried)	0.42	(3.5)
	4) All other coatings are subject to the emission limitations for miscellaneous metal parts and products coatings in subsection (j) above.		

		kg/l	lb/gal
l)	Wood Furniture Coating		
	1) Clear topcoat	0.67	(5.6)
	2) Opaque stain	0.56	(4.7)
	3) Pigmented coat	0.60	(5.0)
	4) Repair coat	0.67	(5.6)
	5) Sealer	0.67	(5.6)

6)	Semi-transparent stain	0.79	(6.6)
7)	Wash coat	0.73	(6.1)

(Note: An owner or operator of a wood furniture coating operation subject to this Section shall apply all coatings, with the exception of no more than 37.8 l (10 gal) of coating per day used for touch-up and repair operations, using one or more of the following application systems: airless spray application system, air-assisted airless spray application system, electrostatic spray application system, electrostatic bell or disc spray application system, heated airless spray application system, roller coating, brush or wipe coating application system, dip coating application system or high volume low pressure (HVLP) application system.)

m) Existing Diesel-Electric Locomotive Coating Lines in Cook County

		kg/l	lb/gal
1)	Extreme performance prime coat	0.42	(3.5)
2)	Extreme performance topcoat (air dried)	0.42	(3.5)
3)	Final repair coat (air dried)	0.42	(3.5)
4)	High-temperature aluminum coating	0.72	(6.0)
5)	All other coatings	0.36	(3.0)

n) Plastic Parts Coating: Automotive/Transportation

			kg/l	lb/gal
1)	Interiors			
	A)	Baked		
		i) Color coat	0.49	(4.1)
		ii) Primer	0.46	(3.8)
	B)	Air Dried		
		i) Color coat	0.38	(3.2)
		ii) Primer	0.42	(3.5)

2)	Exteriors (flexible and non-flexible)			
	A)	Baked		
		i) Primer	0.60	(5.0)
		ii) Primer non-flexible	0.54	(4.5)
		iii) Clear coat	0.52	(4.3)
		iv) Color coat	0.55	(4.6)
	B)	Air Dried		
		i) Primer	0.66	(5.5)
		ii) Clear coat	0.54	(4.5)
		iii) Color coat (red & black)	0.67	(5.6)
		iv) Color coat (others)	0.61	(5.1)
3)	Specialty			
	A)	Vacuum metallizing basecoats, texture basecoats	0.66	(5.5)
	B)	Black coatings, reflective argent coatings, air bag cover coatings, and soft coatings	0.71	(5.9)
	C)	Gloss reducers, vacuum metallizing topcoats, and texture topcoats	0.77	(6.4)
	D)	Stencil coatings, adhesion primers, ink pad coatings, electrostatic prep coatings, and resist coatings	0.82	(6.8)
	E)	Head lamp lens coatings	0.89	(7.4)

o) Plastic Parts Coating: Business Machine

		kg/l	lb/gal
1)	Primer	0.14	(1.2)
2)	Color coat (non-texture coat)	0.28	(2.3)
3)	Color coat (texture coat)	0.28	(2.3)
4)	Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings	0.48	(4.0)
5)	Specialty Coatings		
	A) Soft coat	0.52	(4.3)
	B) Plating resist	0.71	(5.9)
	C) Plating sensitizer	0.85	(7.1)*

(Source: Added at ____ Ill. Reg. _____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSIONS STANDARDS AND LIMITATIONS FOR STATIONARY SOURCES

PART 219
ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS FOR THE METRO EAST AREA

SUBPART A: GENERAL PROVISIONS

Section

SUBPART B: ORGANIC EMISSIONS FROM STORAGE AND LOADING OPERATIONS

SUBPART C: ORGANIC EMISSIONS FROM MISCELLANEOUS EQUIPMENT

SUBPART E: SOLVENT CLEANING

SUBPART F: COATING OPERATIONS

SUBPART G: USE OF ORGANIC MATERIAL

SUBPART H: PRINTING AND PUBLISHING

SUBPART Q: ~~LEAKS FROM~~ SYNTHETIC ORGANIC CHEMICAL AND POLYMER MANUFACTURING PLANT

SUBPART R: PETROLEUM REFINING AND RELATED INDUSTRIES; ASPHALT MATERIALS

SUBPART S: RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS

SUBPART T: PHARMACEUTICAL MANUFACTURING

SUBPART V: AIR OXIDATION PROCESSES

SUBPART W: AGRICULTURE

SUBPART X: CONSTRUCTION

SUBPART Y: GASOLINE DISTRIBUTION

SUBPART Z: DRY CLEANERS

SUBPART AA: PAINT AND INK MANUFACTURING

SUBPART BB: POLYSTYRENE PLANTS

SUBPART FF: BAKERY OVENS

SUBPART PP: MISCELLANEOUS FABRICATED PRODUCT MANUFACTURING PROCESSES

SUBPART QQ: MISCELLANEOUS FORMULATION MANUFACTURING PROCESSES

SUBPART RR: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING PROCESSES

SUBPART TT: OTHER EMISSION UNITS

SUBPART UU: RECORDKEEPING AND REPORTING

Section 219.Appendix C: Reference Test Methods For Air Oxidation Processes
Section 219.Appendix D: Coefficients for the Total Resource Effectiveness Index (TRE) Equation
Section 219.Appendix G: TRE Index Measurements for SOCMI Reactors and Distillation Units
Section 219.Appendix H: Baseline VOM Content Limitations for Subpart F, Section 219.212 Cross-Line Averaging

AUTHORITY: Implementing Section 10 and authorized by Section 28.5 of the Environmental Protection Act ~~(Ill. Rev. Stat. 1991, ch. 111½, par. 1010) (P.A. 87-1213, effective September 26, 1992)~~ [415 ILCS 5/10 and 28.5].

SOURCE: Adopted at R91-8 at 15 Ill. Reg. 12491, effective August 16, 1991; amended in R91-24 at 16 Ill. Reg. 13597, effective August 24, 1992; amended in R91-30 at 16 Ill. Reg. 13883, effective August 24, 1992; emergency amendment in R93-12 at 17 Ill. Reg. 8295, effective May 24, 1993, for a maximum of 150 days, amended in R93-9 at 17 Ill. Reg. 16918, effective September 27, 1993 and October 21, 1993; amended in R93-28 at 18 Ill. Reg. 4242, effective March 3, 1994; amended in R94-12 at 18 Ill. Reg. at 14987, effective September 21, 1994; amended in R94-15 at 18 Ill. Reg. at 16415, effective October 25, 1994; amended in R94-16 at 18 Ill. Reg. at 16980, effective November 15, 1994; amended in R94-21 at 19 Ill. Reg. at _____, effective _____.

BOARD NOTE: This Part implements the Environmental Protection Act as of July 1, 1994.

SUBPART F: COATING OPERATIONS

Section 219.204 Emission Limitations

Except as provided in Sections 219.205, 219.207 ~~and~~, 219.208 , and 219.212 of this ~~Part~~ Subpart, no owner or operator of a coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for the specified coating. Compliance with the emission limitations marked with an asterisk in this Section is required on and after March 15, 1996. Compliance with emission limitations not marked with an asterisk is required until March 15, 1996. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. Compliance with this Subpart must be demonstrated through the applicable coating analysis test methods and procedures specified in Section 219.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 219.211(c) of this ~~Part~~ Subpart except where noted. (Note: The

equation presented in Section 219.206 of this Part shall be used to calculate emission limitations for determining compliance by add-on controls, credits for transfer efficiency, emissions trades and cross-line averaging.) The emission limitations are as follows:

		kg/l	lb/gal
a)	Automobile or Light-Duty Truck Coating		
1)	Prime coat	0.14	(1.2)
		0.14*	(1.2)*
2)	Primer surface coat	1.81	(15.1)
		1.81*	(15.1)*

(Note: The primer surface coat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire primer surface operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 219.105(b) and the recordkeeping and reporting requirements specified in Section 219.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 219.205 does not apply to the primer surface limitation.)

		kg/l	lb/gal
3)	Topcoat	1.81	(15.1)
		1.81*	(15.1)*

(Note: The topcoat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire topcoat operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 219.105(b) of this Part and the recordkeeping and reporting requirements specified in Section 219.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 219.205 of this Part does not apply to the topcoat limitation.)

		kg/l	lb/gal
4)	Final repair coat	0.58	(4.8)

		0.58*	(4.8)*
b)	Can Coating	kg/l	lb/gal
	1) Sheet basecoat and overvarnish	~~0.34~~	~~(2.8)~~
	A) Sheet basecoat	0.34 0.26*	(2.8) (2.2)*
	B) Overvarnish	0.34 0.34	(2.8) (2.8)*
	2) Exterior basecoat and overvarnish	0.34 0.25*	(2.8) (2.1)*
	3) Interior body spray coat	~~0.51~~	~~(4.2)~~
	A) Two piece	0.51 0.44*	(4.2) (3.7)*
	B) Three piece	0.51 0.51*	(4.2) (4.2)*
	4) Exterior end coat	0.51 0.51*	(4.2) (4.2)*
	5) Side seam spray coat	0.66 0.66*	(5.5) (5.5)*
	6) End sealing compound coat	0.44 0.44*	(3.7) (3.7)*
		kg/l	lb/gal
c)	Paper Coating	0.35 0.28*	(2.9) (2.3)*

(Note: The paper coating limitation shall not apply to any owner or operator of any paper coating line on which printing is performed if the paper coating line complies with the emissions limitations in Subpart H: Printing and Publishing, Sections 219.401 of this Part.)

		kg/l	lb/gal
d)	Coil Coating	0.31 0.20*	(2.6) (1.7)*
e)	Fabric Coating	0.35 0.28*	(2.9) (2.3)*
f)	Vinyl Coating	0.45 0.28*	(3.8) (2.3)*

g)	Metal Furniture Coating	~~0.36~~	~~(3.0)~~
	1) Air dried	0.36	(3.0)
		0.34*	(2.8)*
	2) Baked	0.36	(3.0)
		0.28*	(2.3)*
h)	Large Appliance Coating	~~0.34~~	~~(2.8)~~
	1) Air dried	0.34	(2.8)
		0.34*	(2.8)*
	2) Baked	0.34	(2.8)
		0.28*	(2.3)*

(Note: The limitation shall not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 0.95 l (1 quart) in any one rolling eight-hour period.)

		kg/l	lb/gal
i)	Magnet Wire Coating	0.20	(1.7)
		0.20*	(1.7)*
j)	Miscellaneous Metal Parts and Products Coating		
	1) Clear coating	0.52	(4.3)
		0.52*	(4.3)*
	~~2) Air-dried coating~~	~~0.42~~	~~(3.5)~~
	~~3~~2) Extreme performance coating	~~0.42~~	~~(3.5)~~
	A) Air dried	0.42	(3.5)
		0.42*	(3.5)*
	B) Baked	0.42	(3.5)
		0.40*	(3.3)*
	~~4~~3) Steel pail and drum interior coating	0.52	(4.3)
		0.52*	(4.3)*
	~~5~~4) All other coatings	~~0.36~~	~~(3.0)~~
	A) Air Dried	0.42	(3.5)
		0.40*	(3.3)*
	B) Baked	0.36	(3.0)
		0.34*	(2.8)*

5) Metallic coating

A)	Air Dried	0.42 0.42*	(3.5) (3.5)*
B)	Baked	0.36 0.36*	(3.0) (3.0)*

6) For purposes of subsection 219.204(j)(5) of this Section, "metallic coating" means a coating which contains more than 1/4 lb/gal of metal particles, as applied.

k) Heavy Off-Highway Vehicle Products Coating		kg/l	lb/gal
1)	Extreme performance prime coat	0.42 0.42*	(3.5) (3.5)*
2)	Extreme performance top-coat (air dried)	0.42 0.42*	(3.5) (3.5)*
3)	Final repair coat (air dried)	0.42 0.42*	(3.5) (3.5)*

4) All other coatings are subject to the emission limitations for miscellaneous metal parts and products coatings in subsection (j) above.

l) Wood Furniture Coating		kg/l	lb/gal
1)	Clear topcoat	0.67 0.67*	(5.6) (5.6)*
2)	Opaque stain	0.56 0.56*	(4.7) (4.7)*
3)	Pigmented coat	0.60 0.60*	(5.0) (5.0)*
4)	Repair coat	0.67 0.67*	(5.6) (5.6)*
5)	Sealer	0.67 0.67*	(5.6) (5.6)*
6)	Semi-transparent stain	0.79 0.79*	(6.6) (6.6)*
7)	Wash coat	0.73 0.73*	(6.1) (6.1)*

(Note: An owner or operator of a wood furniture coating operation subject to this Section shall

apply all coatings, with the exception of no more than 37.8 l (10 gal) of coating per day used for touch-up and repair operations, using one or more of the following application systems: airless spray application system, air-assisted airless spray application system, electrostatic spray application system, electrostatic bell or disc spray application system, heated airless spray application system, roller coating, brush or wipe coating application system, dip coating application system or high volume low pressure (HVLP) application system.)

m) Plastic Parts Coating: Automotive/Transportation

			kg/l	lb/gal
1)	Interiors			
	A)	Baked		
		i) Color coat	0.49*	(4.1)*
		ii) Primer	0.46*	(3.8)*
	B)	Air Dried		
		i) Color coat	0.38*	(3.2)*
		ii) Primer	0.42*	(3.5)*
2)	Exteriors (flexible and non-flexible)			
	A)	Baked		
		i) Primer	0.60*	(5.0)*
		ii) Primer non-flexible	0.54*	(4.5)*
		iii) Clear coat	0.52*	(4.3)*
		iv) Color coat	0.55*	(4.6)*
	B)	Air Dried		
		i) Primer	0.66*	(5.5)*
		ii) Clear coat	0.54*	(4.5)*
		iii) Color coat (red & black)	0.67*	(5.6)*
		iv) Color coat		

	(others)	0.61*	(5.1)*

3) Specialty

A)	Vacuum metallizing basecoats, texture basecoats	0.66*	(5.5)*
B)	Black coatings, reflective argent coatings, air bag cover coatings, and soft coatings	0.71*	(5.9)*
C)	Gloss reducers, vacuum metallizing topcoats, and texture topcoats	0.77*	(6.4)*
D)	Stencil coatings, adhesion primers, ink pad coatings, electrostatic prep coatings, and resist coatings	0.82*	(6.8)*
E)	Head lamp lens coatings	0.89*	(7.4)*

n) Plastic Parts Coating: Business Machine

		kg/l	lb/gal
1)	Primer	0.14*	(1.2)*
2)	Color coat (non-texture coat)	0.28*	(2.3)*
3)	Color coat (texture coat)	0.28*	(2.3)*
4)	Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings	0.48*	(4.0)*

5) Specialty Coatings

A)	Soft coat	0.52*	(4.3)*
B)	Plating resist	0.71*	(5.9)*
C)	Plating sensitizer	0.85*	(7.1)*

(Source: Amended at _____ Ill. Reg. _____, effective __ _____)

Section 219.205 Daily-Weighted Average Limitations

No owner or operator of a coating line subject to the limitations of Section 219.204 of this ~~Part~~Subpart and complying by means of this Section shall operate the subject coating line unless the owner or operator has demonstrated compliance with subsection (a), (b), (c), (d), (e)~~,~~ ~~or~~ (f)~~,~~ (g) or (h) of this Section (depending upon the category of coating) through the applicable coating analysis test methods and procedures specified in Section 219.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 219.211(d) of this ~~Part~~Subpart:

a) No owner or operator of a coating line subject to only one of the limitations from among Section 219.204(a)(1), (a)(4), (c), (d), (e), (f)~~, (g), (h),~~ or (i) of this ~~Part~~Subpart shall apply coatings on any such coating line, during any day, whose daily-weighted average VOM content exceeds the emission limitation to which the coatings are subject.

b) No owner or operator of a miscellaneous metal parts and products coating line subject to the limitations of Section 219.204(j) of this ~~Part~~Subpart shall apply coatings to miscellaneous metal parts or products on the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section ~~below~~ are met.

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 219.204(j) ~~above~~ of this Subpart during the same day (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used, or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 219.204(j) ~~above~~of this Subpart, during the same day, the owner or operator shall have a site-specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) 51 Fed. Reg. 43814 (December 4, 1986), must be satisfied.

c) No owner or operator of a can coating line subject to the limitations of Section 219.204(b) of this

~~Part~~Subpart shall operate the subject coating line using a coating with a VOM content in excess of the limitations specified in Section 219.204(b) of this ~~Part~~Subpart unless all of the following requirements are met:

1) An alternative daily emission limitation for the can coating operation, i.e. for all of the can coating lines at the source, shall be determined according to subsection (c)(2) ~~below~~of this Section. Actual daily emissions shall never exceed the alternative daily emission limitation and shall be calculated by use of the following equation.

$$E_d = \sum_{i=1}^{n} V_i \quad C_i$$

where:

E_d = Actual VOM emissions for the day in units of kg/day (lbs/day);

i = Subscript denoting a specific coating applied;

n = Total number of coatings applied in the can coating operation, i.e. all can coating lines at the source;

V_i = Volume of each coating applied for the day in units of l/day (gal/day) of coating (minus water and any compounds which are specifically exempted from the definition of VOM);

C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM).

2) The alternative daily emission limitation (A_d) shall be determined for the can coating operation, i.e. for all of the can coating lines at the source, on a daily basis as follows:

$$A_d = \sum_{i=1}^{n} V_i \quad L_i \quad \frac{(D_i - C_i)}{(D_i - L_i)}$$

where:

A_d = The VOM emissions allowed for the day in units of kg/day (lbs/day);

i = Subscript denoting a specific coating applied;

n = Total number of surface coatings applied in the can coating operation;

C_i = The VOM content of each surface coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM);

D_i = The density of VOM in each coating applied. For the purposes of calculating A_d, the density is 0.882 kg VOM/l VOM (7.36 lbs VOM/gal VOM);

V_i = Volume of each surface coating applied for the day in units of l (gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM);

L_i = The VOM emission limitation for each surface coating applied as specified in Section 219.204(b) of this ~~Part~~Subpart in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM).

d) No owner or operator of a heavy off-highway vehicle products coating line subject to the limitations of Section 219.204(k) of this ~~Part~~Subpart shall apply coatings to heavy off-highway vehicle products on the subject coating line unless the requirements of subsection (d)(1) or (d)(2) ~~below~~of this Section are met.

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 219.204(k) ~~above~~of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used, or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 219.204(k) ~~above~~of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) 51 Fed. Reg. 43814 (December 4, 1986), must be satisfied.

e) No owner or operator of a wood furniture coating line subject to the limitations of Section 219.204(l) of this ~~Part~~Subpart shall apply coatings to wood furniture on the subject coating line unless the requirements of subsection (e)(1) or ~~subsection~~ (e)(2) ~~below~~of this Section, in addition to the requirements specified in the note to Section 219.204(l) of this ~~Part~~of this Subpart, are met.

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 219.204(l) ~~above~~of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.67 kg/l [5.6 lbs/gal]), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used, or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 219.204(l) ~~above~~of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) 51 Fed. Reg. 43814 (December 4, 1986), must be satisfied.

f) No owner or operator of a plastic parts coating line subject to the limitations of Section 219.204(m) or (n) of this Subpart shall apply coatings to business machine or automotive/transportation plastic parts on the subject coating line unless the requirements of subsection (f)(1) or (f)(2) of this Section are met.

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 219.204(m) or (n) of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), the

daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used, or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 219.204(m) or (n) of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) must be satisfied.

g) No owner or operator of a metal furniture coating line subject to the limitations of Section 219.204(g) of this Subpart shall apply coatings on the subject coating line unless the requirements of subsection (g)(1) or (g)(2) of this Section are met.

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 219.204(g) of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.34 kg/l [2.8 lbs/gal]), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used, or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 219.204(g) of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) must be satisfied.

h) No owner or operator of a large appliance coating line subject to the limitations of Section 219.204(h) of this Subpart shall apply coatings on the subject coating line unless the requirements of subsection (h)(1) or (h)(2) of this Section are met.

1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 219.204(h) of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.34 kg/l [2.8 lbs/gal]), the daily-weighted average VOM content shall not exceed the coating

VOM content limit corresponding to the category of coating used, or

2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 219.204(h) of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) must be satisfied.

(Source: Amended at _____ Ill. Reg. _____ , effective _____)

Section 219.207 Alternative Emission Limitations

a) Any owner or operator of a coating line subject to Section 219.204 of this ~~Part~~Subpart may comply with this Section, rather than with Section 219.204 of this ~~Part~~Subpart, if a capture system and control device are operated at all times the coating line is in operation and the owner or operator demonstrates compliance with subsection (c), (d), (e), (f), (g), ~~or~~ (h), (i) or (j) of this Section (depending upon the source category) through the applicable coating analysis and capture system and control device efficiency test methods and procedures specified in Section 219.105 of this Part and the recordkeeping and reporting requirements specified in Section 219.211(e) of this ~~Part~~Subpart; and the control device is equipped with the applicable monitoring equipment specified in Section 219.105(d) of this Part and the monitoring equipment is installed, calibrated, operated and maintained according to vendor specifications at all times the control device is in use. A capture system and control device, which does not demonstrate compliance with subsection (c), (d), (e), (f), (g), ~~or~~ (h), (i), (j) or (k) of this Section may be used as an alternative to compliance with Section 219.204 of this ~~Part~~Subpart only if the alternative is approved by the Agency and approved by the USEPA as a SIP revision.

b) Alternative Add-On Control Methodologies

1) The coating line is equipped with a capture system and control device that provides 81 percent reduction in the overall emissions of VOM from the coating line and the control device has a 90 percent efficiency, or

2) The system used to control VOM from the coating line is demonstrated to have an overall efficiency

sufficient to limit VOM emissions to no more than what is allowed under Section 219.204 of this ~~Part~~Subpart. Use of any control system other than an afterburner, carbon adsorption, condensation, or absorption scrubber system can be allowed only if approved by the Agency and approved by the USEPA as a SIP revision. The use of transfer efficiency credits can be allowed only if approved by the Agency and approved by the USEPA as a SIP revision. Baseline transfer efficiencies and transfer efficiency test methods must be approved by the Agency and the USEPA.

Such overall efficiency is to be determined as follows:

A) Obtain the emission limitation from the appropriate subsection in Section 219.204 of this ~~Part~~Subpart;

B) Calculate "S" according to the equation in Section 219.206 of this ~~Part~~Subpart;

C) Calculate the overall efficiency required according to Section 219.105(e) of this Part. For the purposes of calculating this value, according to the equation in Section 219.105(e)(2) of this Part, VOM_i is equal to the value of "S" as determined above in subsection (b)(2)(B) of this Section.

c) No owner or operator of a coating line subject to only one of the emission limitations from among Section 219.204(a)(1), (a)(4), (c), (d), (e), (f)~~, (g), (h)~~ or (i) of this ~~Part~~Subpart and equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) ~~above~~of this Section are met. No owner or operator of a coating line subject to Section 219.204(a)(2) or (a)(3) of this Part and equipped with a capture system and control device shall operate the coating line unless the owner or operator demonstrates compliance with such limitation in accordance with the topcoat protocol referenced in Section 219.105(b) of this Part.

d) No owner or operator of a miscellaneous metal parts and products coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(j) of this ~~Part~~Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), and which is equipped with a capture system and control device shall operate the subject coating

line unless the requirements in subsection (b)(1) or (b)(2) ~~above~~of this Section are met.

e) No owner or operator of a heavy off-highway vehicle products coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(k) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), and which is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) ~~above~~of this Section are met.

f) No owner or operator of a wood furniture coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(l) of this ~~Part~~Subpart (e.g., all coatings used on the line are subject to 0.67 kg/l [5.6 lbs/gal]), and which is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met. If compliance is achieved by meeting the requirements in subsection (b)(2) of this ~~Part~~Section, then the provisions in the note to Section 219.204(l) of this ~~Part~~Subpart must also be met.

g) No owner or operator of a can coating line ~~and~~ equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection ~~(h)~~(g)(1) or ~~(h)~~(g)(2) ~~below~~of this Section are met.

1) An alternative daily emission limitation for the can coating operation, i.e. for all of the can coating lines at the source, shall be determined according to Section 219.205(c)(2) of this ~~Part~~Subpart. Actual daily emissions shall never exceed the alternative daily emission limitation and shall be calculated by use of the following equation:

$$E_d = \sum_{i=1}^{n} V_i \; C_i \; (1-F_i)$$

where:

E_d = Actual VOM emissions for the day in units of kg/day (lbs/day);

i = Subscript denoting the specific coating applied;

n = Total number of surface coatings as applied in the can coating operation;

V_i = Volume of each coating as applied for the day in units of l/day (gal/day) of coating (minus water and any compounds which are specifically exempted from the definition of VOM);

C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM) and

F_i = Fraction, by weight, of VOM emissions from the surface coating, reduced or prevented from being emitted to the ambient air. This is the overall efficiency of the capture system and control device.

2) The coating line is equipped with a capture system and control device that provide 75 percent reduction in the overall emissions of VOM from the coating line and the control device has a 90 percent efficiency.

h) No owner or operator of a plastic parts coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(m) or (n) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l [3.5 lbs/gal]), and which is equipped with a capture system and control device, shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

i) No owner or operator of a metal furniture coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(q) of this Subpart (e.g., all coatings used on the line are subject to 0.34 kg/l [2.8 lbs/gal]), and which is equipped with a capture system and control device, shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

j) No owner or operator of a large appliance coating line which applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(h) of this Subpart (e.g., all coatings used on the line are subject to 0.34 kg/l [2.8 lbs/gal]), and which is equipped with a capture system and control device, shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

Section 219.208 Exemptions From Emission Limitations

a) Exemptions for all coating categories except wood furniture coating. The limitations of this Subpart shall not apply to coating lines within a source, that otherwise would be subject to the same subsection of Section 219.204 (because they belong to the same coating category, e.g. can coating), provided that combined actual emissions of VOM from all lines at the source subject to that subsection never exceed 6.8 kg/day (15 lbs/day) before the application of capture systems and control devices. (For example, can coating lines within a source would not be subject to the limitations of Section 219.204(b) of this ~~Part~~Subpart if the combined actual emissions of VOM from the can coating lines never exceed 6.8 kg/day (15 lbs/day) before the application of capture systems and control devices.) Volatile organic material emissions from heavy off-highway vehicle products coating lines must be combined with VOM emissions from miscellaneous metal parts and products coating lines to determine applicability. Any owner or operator of a coating source shall comply with the applicable coating analysis test methods and procedures specified in Section 219.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 219.211(a) of this ~~Part~~Subpart if total VOM emissions from the subject coating lines are always less than or equal to 6.8 kg/day (15 lbs/day) before the application of capture systems and control devices and, therefore, are not subject to the limitations of Section 219.204 of this ~~Part~~Subpart. Once a category of coating lines at a source is subject to the limitations in Section 219.204~~,~~ of this Part the coating lines are always subject to the limitations in Section 219.204 of this ~~Part~~Subpart.

b) Applicability for wood furniture coating

1) The limitations of this Subpart shall apply to a source's wood furniture coating lines if the

source contains process emission units, not regulated by Subparts B, E, F (excluding Section 219.204(l) of this ~~Part~~Subpart), H (excluding Section 219.405 of this Part), Q, R, S, T (excluding Section 219.486 of this Part), V, X, Y, Z or BB of this Part, which as a group both:

A) Have maximum theoretical emissions of 91 Mg (100 tons) or more per calendar year of VOM if no air pollution control equipment were used, and

B) Are not limited to less than 91 Mg (100 tons) of VOM per calendar year if no air pollution control equipment were used, through production or capacity limitations contained in a federally enforceable permit or SIP revision.

2) The limitations of this Subpart shall apply to a source's wood furniture coating lines, on and after March 15, 1996, if the source contains process emission units, which as a group, have a potential to emit 22.7 Mg (25 tons) or more of VOM per calendar year and have not limited emissions to less than 22.7 Mg (25 tons) of VOM per calendar year through production or capacity limitations contained in a federally enforceable operating permit or as a SIP revision, and which:

A) Are not regulated by Subparts B, E, F (excluding Section 219.204(l) of this Subpart), H, Q, R, S, T (excluding Section 219.486 of this Part), V, X, Y, Z or BB of this Part; and

B) Are not included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.

~~2~~3) If a source ceases to fulfill the criteria of subsection (b)(1) or (b)(2) of this Section, the limitations of Section 219.204(l) of this ~~Part~~Subpart shall continue to apply to any wood furniture coating line which was ever subject to the limitations of Section 219.204(l) of this ~~Part~~Subpart.

~~3~~4) For the purposes of subsection (b) of this Section, an emission unit shall be considered to be regulated by a Subpart if it is subject to the limitations of that Subpart. An emission unit is not considered regulated by a Subpart if it is not subject to the limits of that Subpart, e.g., the emission unit is covered by an exemption in the Subpart or the applicability criteria of the Subpart are not met.

~~4~~5) Any owner or operator of a wood furniture coating line to which the limitations of this Subpart are not applicable due to the criteria in subsection (b) of this Section shall, upon request by the Agency or the USEPA, submit records to the Agency and the USEPA within 30 calendar days from the date of the request that document that the coating line is exempt from the limitations of this Subpart.

c) On and after March 15, 1996, the limitations of this Subpart shall not apply to touch-up and repair coatings used by a coating source described by subsections 219.204(b), (d), (f), (g), (i), (j), (m) and (n) of this Subpart; provided that the source-wide volume of such coatings used does not exceed 0.95 1 (1 quart) per eight-hour period or exceed 209 1/yr (55 gal/yr) for any rolling twelve month period. Recordkeeping and reporting for touch-up and repair coatings shall be consistent with Section 219.211(b)(4) of this Subpart.

d) On and after March 15, 1996, the owner or operator of a coating line or a group of coating lines using touch-up and repair coatings that are exempted from the limitations of Section 219.204(b), (d), (f), (g), (i), (j), (m) and (n) of this Subpart because of the provisions of Section 219.208(c) of this Subpart shall:

1) Collect and record the name, identification number, and volume used of each touch-up and repair coating, as applied on each coating line, per eight-hour period and per month;

2) Perform calculations on a daily basis, and maintain at the source records of such calculations of the combined volume of touch-up and repair coatings used source-wide for each eight-hour period;

3) Perform calculations on a monthly basis, and maintain at the source records of such calculations of the combined volume of touch-up and repair coatings used source-wide for the month and the rolling twelve month period;

4) Prepare and maintain at the source an annual summary of the information required to be compiled pursuant to subsections (c)(4)(A) and (c)(4)(B) of this Section on or before January 31 of the following year;

5) Maintain at the source for a minimum period of three years all records required to be kept under this subsection and make such records available to the Agency upon request;

6) Notify the Agency in writing if the use of touch-up and repair coatings at the source ever exceeds a volume of 0.95 1 (1 quart) per eight-hour period or exceeds 209 1/yr (55 gal/yr) for any rolling twelve month period within 30 days after any such exceedance. Such notification shall include a copy of any records of such exceedance; and

7) "Touch-up and repair coatings" means, for purposes of 35 Ill. Adm. Code 219.208, any coating used to cover minor scratches and nicks that occur during manufacturing and assembly processes.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

Section 219.210 Compliance Section

Every owner or operator of a coating line (of a type included within Section 219.204 of this ~~Part~~Subpart) shall comply with the requirements of Section 219.204, 219.205, 219.207 or 219.208 and Section 219.211 ~~of this Part~~or Sections 219.212 and 219.213 of this Subpart in accordance with the appropriate compliance schedule as specified in subsection (a), (b), (c), ~~or~~ (d) , (e) or (f) below:

a) No owner or operator of a coating line which is exempt from the limitations of Section 219.204 of this ~~Part~~ Subpart because of the criteria in Section 219.208(a) of this ~~Part~~ Subpart shall operate said coating line on or after a date consistent with Section 219.106 of this Part, unless the owner or operator has complied with, and continues to comply with, Section 219.211(b) of this ~~Part~~ Subpart. Wood furniture coating lines are not subject to Section 219.211(b) of this ~~Part~~ Subpart.

b) No owner or operator of a coating line complying by means of Section 219.204 of this ~~Part~~ Subpart shall operate said coating line on or after a date consistent with Section 219.106 of this Part, unless the owner or operator has complied with, and continues to comply with, Sections 219.204 and 219.211(c) of this ~~Part~~ Subpart.

c) No owner or operator of a coating line complying by means of Section 219.205 of this ~~Part~~ Subpart shall operate said coating line on or after a date consistent with Section 219.106 of this Part, unless the owner or operator has complied with, and continues to comply with, Sections 219.205 and 219.211(d) of this ~~Part~~ Subpart.

d) No owner or operator of a coating line complying by means of Section 219.207 of this ~~Part~~ Subpart shall operate said coating line on or after a date consistent with Section 219.106 of this Part, unless the owner or operator has complied with, and continues to comply with, Sections 219.207 and 219.211(e) of this ~~Part~~ Subpart.

e) No owner or operator of a coating line subject to one or more of the emission limitations contained in Section 219.204 of this Subpart on or after March 15, 1996, choosing to comply by means of Section 219.204, 219.205 or 219.207 of this Subpart, shall operate said coating line on or after March 15, 1996, unless the owner or operator complies with and continues to comply with, respectively, the applicable requirements in Section 219.204, or the alternative control options in Sections 219.205 or 219.207 and the requirements of Section 219.211.

f) No owner or operator of a coating line subject to one or more of the emission limitations contained in Section 219.204 of this Subpart on or after March 15, 1996, choosing to comply by means of Section 219.212 of this Subpart, shall operate said coating line on or after March 15, 1996, unless the owner or operator complies with and continues to comply with the requirements of Sections 219.212 and 219.213 of this Subpart.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

Section 219.212 Cross-Line Averaging to Establish Compliance for Coating Lines

a) On and after March 15, 1996, any owner or operator of a coating line subject to the limitations set forth in Section 219.204 of this Subpart, and with coating lines in operation prior to January 1, 1991 ("pre-existing coating lines"), may, for pre-existing coating lines only, elect to comply with the requirements of this Section, rather than complying with the applicable emission limitations set forth in Section 219.204, if an operational change of the type described below has been made after January 1, 1991, to one or more pre-

existing coating lines at the source. An operational change occurs when a pre-existing coating line is replaced with a line using lower VOM coating for the same purpose as the replaced line ("replacement line"). A source electing to rely on this Section to demonstrate compliance with the requirements of this Subpart shall operate pursuant to federally enforceable permit conditions approved by the Agency and USEPA.

b) An owner or operator of pre-existing coating lines subject to a VOM content limitation in Section 219.204 of this Subpart and electing to rely on this Section to demonstrate compliance with this Subpart must establish, by use of the equations in subsection (d) of this Section, that the calculated actual daily VOM emissions from all participating coating lines, as defined below, are less than the calculated daily allowable VOM emissions from the same group of coating lines. For any pre-existing coating line to be aggregated for the purposes of Section 219.212, 219.213, or 219.214 of this Subpart ("participating coating lines"), the source must establish that:

1) All coatings applied on the participating coating line shall, at all times, have a VOM content less than or equal to the applicable VOM content limitation for such coating listed in Appendix H of this Part; and

2) On the date the source elects to rely on this Section to demonstrate compliance with this Subpart, all coatings applied on the participating coating line are not already in compliance with the VOM content limitation for such coating effective on or after March 15, 1996; or the participating coating line is a replacement line, as defined in subsection (a) of this Section with an operational change occurring on or after January 1, 1991.

c) Notwithstanding subsection (a) of this Section, any owner or operator of a coating line subject to the limitations set forth in Section 219.204 of this Subpart and electing to rely on this Section to demonstrate compliance with this Subpart, may also include as a participating coating line, until December 31, 1999, only, any replacement line that satisfies all of the following conditions:

1) The replacement line is operated as a powder coating line;

2) The replacement line was added after July 1, 1988; and

3) The owner or operator also includes as a participating coating line one or more coating lines that satisfy the criteria of a replacement line, as described in subsection (a) of this Section.

d) To demonstrate compliance with this Section, a source shall establish the following:

1) An alternative daily emission limitation shall be determined for all participating coating lines at the source according to subsection (d)(2) of this Section. All participating coating lines shall be factored in each day to demonstrate compliance. Provided compliance is established pursuant to the requirements in this subsection, nothing in this Section requires daily operation of each participating line. Actual daily emissions from all participating coating lines (E_d) shall never exceed the alternative daily emission limitation (A_d) and shall be calculated by use of the following equation:

$$E_d = \sum_{i=1}^{n} V_i \quad C_i$$

where:

E_d = Actual daily VOM emissions from participating coating lines in units of kg/day (lbs/day);

i = Subscript denoting a specific coating applied;

n = Total number of coatings applied by all participating coating lines at the source;

V_i = Volume of each coating applied for the day in units of l/day (gal/day) of coating (minus water and any compounds which are specifically exempted from the definition of VOM); and

C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM).

2) The alternative daily emission limitation (A_d) shall be determined for all participating coating lines at the source on a daily basis as follows:

$A_d = A_l + A_p$

where A_l and A_p are defined in subsections (2)(A) and (2)(B) of this subsection.

A) The portion of the alternative daily emissions limitation for coating operations at a source using non-powder coating (A_l) shall be determined for all such participating non-powder coating lines on a daily basis as follows:

$$A_l = \sum_{i=1}^{n} V_i L_i \frac{(D_i - C_i)}{(D_i - L_i)}$$

where:

A_l = The VOM emissions allowed for the day in units of kg/day (lbs/day);

i = Subscript denoting a specific coating applied;

n = Total number of coatings applied in the participating coating lines;

C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM);

D_i = The density of VOM in each coating applied. For the purposes of calculating A_l, the density is 0.882 kg VOM/l VOM (7.36 lbs VOM/gal VOM);

V_i = Volume of each coating applied for the day in units of l (gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM); and

L_i = The VOM emission limitation for each coating applied, as specified in Section 219.204 of this Subpart, in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM).

B) The portion of the alternative daily emission limitation for coating operations at a source using powdered coating (A_p) shall be determined for all such participating powder coating lines at the source on a daily basis as follows:

$$A_p = \sum_{h=1}^{m} \sum_{j=1}^{n} \frac{V_j \quad L_j \quad D_j \quad K_h}{(D_j \quad - \quad L_j)}$$

where:

A_p = The VOM emissions allowed for the day in units of kg/day (lbs/day);

h = Subscript denoting a specific powder coating line;

j = Subscript denoting a specific powder coating applied;

m = Total number of participating powder coating lines;

n = Total number of powder coatings applied in the participating coating lines;

D_j = The assumed density of VOM in liquid coating, 0.882 kg VOM/l VOM (7.36 lbs VOM/gal VOM);

V_j = Volume of each powder coating consumed for the day in units of l (gal) of coating;

L_j = The VOM emission limitation for each coating applied, as specified in Section 219.204 of this Subpart, in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM); and

K = A constant for each individual coating line representing the ratio of the volume of coating solids consumed on the liquid coating system which has been replaced to the volume of powder coating consumed on the replacement line to accomplish the same coating job. This value shall be determined by the source

based on tests conducted and records maintained pursuant to the requirements of Section 219.213 of this Subpart demonstrating the amount of coating solids consumed as both liquid and powder. Tests methods and recordkeeping requirements shall be approved by the Agency and USEPA and contained in the source's operating permit as federally enforceable permit conditions, subject to the following restrictions:

i) K cannot exceed 0.9 for non-recycled powder coating systems; or

ii) K cannot exceed 2.0 for recycled powder coating systems.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 219.213 Recordkeeping and Reporting for Cross-Line Averaging Participating Coating Lines

Any owner or operator of a coating line that elects to comply by means of Section 219.212 of this Subpart shall establish the following:

a) By the date consistent with Section 219.210(f) of this Subpart, or upon initial start-up of a new coating line replacing a pre-existing coating line, as defined in Section 219.212 of this Subpart, or upon changing the method of compliance for a pre-existing coating line from the requirements of Section 219.204 or Section 219.207 of this Subpart to the requirements of Section 219.212 of this Subpart, the owner or operator of the source shall certify to the Agency that each participating coating line, as determined in Section 219.212 of this Subpart, will be in compliance with Section 219.212 of this Subpart on and after a date consistent with Section 219.210(f) of this Subpart, or on and after the initial start-up date of such participating coating lines. Such certification shall also include:

1) The name and identification number of each participating coating line;

2) The name and identification number of each coating as applied on each participating coating line;

3) The weight of VOM per volume of each coating and the volume of each coating (minus water and any compounds which are specifically exempted from the

definition of VOM) as applied each day on each participating coating line;

4) The instrument or method by which the owner or operator will accurately measure or calculate the volume of each coating as applied each day on each participating coating line;

5) The method by which the owner or operator will create and maintain records each day as required in subsection (b) of this Section;

6) An example of the format in which the records required in subsection (b) of this Section will be kept;

7) A statement that all coatings used on participating coating lines have a VOM content less than or equal to the applicable VOM limitation for such coating set forth in Appendix H of this Part, and that all lines either;

A) Underwent a change in operations incorporating a lower VOM coating on each applicable participating coating line after the date of January 1, 1991; or

B) Are not in compliance and continued compliance with the coating limitations in Section 219.204 of this Subpart, compliance with which is required on or after March 15, 1996.

8) The method by which the owner or operator has calculated K, for the equation contained in Section 219.212(d)(2)(B) of this Subpart, if applicable.

b) On and after a date consistent with Section 219.210(f) of this Subpart, or on and after the initial start-up date, the owner or operator of a source electing to comply with the requirements of this Subpart by means of Section 219.212 of this Subpart shall collect and record the following information on a daily basis for each participating coating line and maintain the information at the source for a period of three years:

1) The name and identification number of each coating as applied on each participating coating line;

2) The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of

VOM) as applied on each participating coating line on a daily basis; and

3) The daily weighted average VOM content of all coatings as applied on each coating line as defined at 35 Ill. Adm. Code 211.1230.

c) On and after a date consistent with Section 219.210(f) of this Subpart, the owner or operator of participating coating lines shall:

1) Notify the Agency within 30 days following an occurrence of a violation of Section 219.212 of this Subpart; and

2) Send to the Agency any record showing a violation of Section 219.212 of this Subpart within 30 days following the occurrence of a violation.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 219.214 Changing Compliance Methods

a) At least 30 calendar days before changing the method of compliance with this Subpart from Section 219.212 of this Subpart to Section 219.204 or Section 219.207 of this Subpart, the owner or operator of a source relying on Section 219.212 to demonstrate compliance with this Subpart for one or more pre-existing coating lines shall comply with all requirements of Section 219.211 (c)(1) or (e)(1) of this Subpart, respectively.

b) Upon changing the method of compliance with this Subpart from Section 219.212 to Section 219.204 or Section 219.207 of this Subpart, the owner or operator of a source shall comply with the requirements of Section 219.211 (c) or (e) of this Subpart, respectively.

c) The owner or operator shall certify that all remaining participating coating lines, if any, comply and continue to comply with the requirements of Section 219.212 of this Subpart.

(Source: Added at _____ Ill. Reg. _____, effective _____)

SUBPART Q: ~~LEAKS FROM~~ SYNTHETIC ORGANIC CHEMICAL AND POLYMER MANUFACTURING PLANT

Section 219.431 Applicability

a) The provisions of Sections 219.431 through 219.436 of this Subpart shall apply to every owner or operator of any chemical manufacturing process unit that manufactures, as a primary product, one or more of the chemicals listed in Appendix A of this Part and that chemical manufacturing process unit causes or allows any reactor or distillation unit, either individually or in tandem, to discharge one or more process vent streams either directly to the atmosphere or to a recovery system.

b) Notwithstanding subsection (a) of this Section, the control requirements set forth within Section 219.432 of this Subpart shall not apply to the following:

1) Any process vent stream with a total resource effectiveness (TRE) index value greater than 1.0. However, such process vent stream remains subject to the performance testing requirements contained in Section 219.433 of this Subpart and the reporting and recordkeeping requirements contained in Section 219.435 of this Subpart;

2) Any reactor or distillation unit that is designed and operated as a batch operation;

3) Any reactor or distillation unit that is part of a polymer manufacturing operation;

4) Any reactor or distillation unit that is part of the chemical manufacturing process unit with a total design capacity of less than 1 gigagram (1,100 tons) per year for all chemicals produced, as a primary product, within that process unit. However, such operations remain subject to the reporting and recordkeeping requirements contained in Section 219.435(d) of this Subpart;

5) Any vent stream with a flow rate less than 0.0085 scm/min or a total VOM concentration, less methane or ethane, of less than 500 ppmv as measured by Method 18 or a concentration of VOM of less than 250 ppmv as measured by Method 25A. However, such operations remain subject to the performance testing requirement listed in Section 219.433 of this Subpart, as well as the reporting and recordkeeping requirements contained in Section 219.435 of this Subpart; or

6) Any reactor or distillation unit included within an Early Reduction Program, as specified in 40 CFR 63, and published in 57 Fed. Reg. 61970 (October 22, 1993), evidenced by a timely enforceable commitment approved by USEPA.

(Source: Added at _____ Ill. Reg. _____, effective ___ _____)

Section 219.432 Control Requirements

a) Every owner or operator of a source subject to the requirements of this Subpart, as determined by Section 219.431 of this Subpart, shall either:

1) Reduce emissions of VOM, less methane or ethane, by 98 weight-percent, or to 20 ppmv, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent;

2) If a boiler or process heater is used to comply with this Subpart, the vent stream shall be introduced into the flame zone of the boiler or process heater; or

3) If a flare is used to comply with this Subpart, it shall comply with the requirements of 40 CFR 60.18, incorporated by reference at Section 219.112 of this Part. The flare operation requirements of 40 CFR 60.18 do not apply if a process, not subject to this Subpart, vents an emergency relief discharge into a common flare header and causes the flare servicing the process subject to this Subpart to not comply with one or more of the provisions of 40 CFR 60.18.

b) Notwithstanding subsection (a) or (c) of this Section, and subject to subsection (b)(2) of this Section:

1) No owner or operator of a source subject to Section 219.432 of this Subpart shall cause or allow VOM to be emitted through an existing control device unless the control device is operated to achieve:

A) 90 percent control of the VOM emissions vented to it; or

B) VOM emissions concentration of less than 50 ppmv, on a dry basis.

2) Any existing control device subject to subsection (a) of this Section is required to meet the 98 percent emissions limit set forth in subsection (a)(1) upon the earlier to occur of the date the control device is replaced for any reason, including, but not limited to, normal maintenance, malfunction, accident, and obsolescence, or December 31, 1999. A control device is considered to be replaced when:

A) All of the device is replaced; or

B) When the cost to repair the device or the cost to replace part of the device exceeds 50 percent of the cost of replacing the entire device with a device that complies with the 98% emissions limitation in subsection (a)(1) of this Section.

c) For each individual vent stream within a chemical manufacturing process unit with a TRE index value greater than 1.0, the owner or operator shall maintain process vent stream parameters that retain a calculated TRE index value greater than 1.0 by means of recovery. Any recovery device shall have as its primary purpose the capture of chemicals for use, reuse or sale. The TRE index value shall be calculated at the outlet of the final recovery device.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 219.433 Performance and Testing Requirements

a) For the purpose of demonstrating compliance with the TRE index value in Section 219.432(c) of this Subpart, an engineering assessment shall be made to determine process vent stream flow rate, net heating value, and VOM emission rate for the representative operating conditions expected to yield the lowest TRE index value. The source shall also calculate the TRE index values pursuant to the equations contained within Appendix G (b)(1) of this Part.

1) If the TRE index value calculated using such engineering assessment and the TRE equation in Appendix G (b)(1) of this Part is greater than 4.0, then the owner or operator is exempt from performing the measurements specified in Appendix G (a) of this Part.

2) If the TRE index value calculated using such engineering assessment and the TRE equation in Appendix G (b)(1) of this Part is less than or equal to 4.0, then the owner or operator shall perform the measurements specified in Appendix G(a) of this Part. An owner or operator of a source may, in the alternative, elect to comply with the control requirements specified in Section 219.432 of this Subpart rather than performing the measurements in Appendix G(a) of this Part.

3) An engineering assessment shall include, but is not limited to, the following:

A) Previous test results, provided the tests are representative of current operating practices at the chemical manufacturing process unit;

B) Bench-scale or pilot-scale test data of the process under representative operating conditions;

C) Maximum flow rate, as stated within a permit limit, applicable to the process vent;

D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to, the following:

i) Use of material balances based on process stoichiometry to estimate maximum VOM concentrations;

ii) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities;

iii) Estimation of VOM concentrations based on saturation conditions; and

iv) Estimation of maximum expected net heating value based on the stream concentration of each organic compound, or, alternatively, as if all VOM in the stream were the compound with the highest heating value.

E) All data, assumptions, and procedures used in the engineering assessment shall be documented.

b) For the purpose of demonstrating compliance with the control requirements in Section 219.432 of this Subpart, the chemical manufacturing process unit shall be run at representative operating conditions and flow rates during any performance test.

c) The following methods in 40 CFR 60, incorporated by reference at Section 219.112 of this Part, shall be used to demonstrate compliance with the reduction efficiency requirement listed in Section 219.432(a)(1) of this Subpart.

1) Method 1 or 1A, incorporated by reference at Section 219.112 of this Part, as appropriate, for selection of the sampling sites. The control

device inlet sampling site for determination of vent stream molar composition or VOM content, less methane and ethane, reduction efficiency shall be located after the last recovery device but prior to the inlet of the control device, prior to any dilution of the process vent stream, and prior to release to the atmosphere.

2) Method 2, 2A, 2C or 2D, incorporated by reference at Section 219.112 of this Part, as appropriate, for determination of gas stream volumetric flow rate.

3) The emission rate correction factor, integrated sampling, and analysis procedure of Method 3, incorporated by reference at Section 219.112 of this Part, shall be used to determine the oxygen concentration ($\%O_{2d}$) for the purpose of determining compliance with the 20 ppmv limitation. The sampling site for determining compliance with the 20 ppmv limitation shall be the same site used for the VOM samples, and samples shall be taken at the same time that the VOM samples are taken. The VOM concentration corrected to 3 percent oxygen (C_c) shall be computed using the following formula:

$$C_c = C_{VOM} \times \frac{17.9}{20.9 - \%O_{2d}}$$

where:

C_c = Concentration of VOM (minus methane and ethane) corrected to 3 percent O_2, dry basis, ppmv.

C_{VOM} = Concentration of VOM (minus methane and ethane), dry basis, ppmv

$\%O_{2d}$ = Concentration of oxygen, dry basis, percent by volume.

4) Method 18, incorporated by reference at Section 219.112 of this Part, to determine the concentration of VOM, less methane and ethane, at the outlet of the control device when determining compliance with the 20 ppmv limitation in Section 219.432(a)(1) of this Subpart, or at both the control device inlet and outlet when the reduction efficiency of the control device is to be determined.

A) The minimum sampling time for each run shall be 1 hour in which either an integrated

sample or four grab samples shall be taken. If grab sampling is used then the samples shall be taken at 15-minute intervals.

B) The emission reduction (R) of VOM, less methane and ethane, shall be determined using the following formula:

$$R = \frac{(E_i - E_o)}{E_i} \quad x\ 100$$

where:

R = Emission reduction, percent by weight.

E_i = Mass rate of VOM (minus methane and ethane) entering the control device, kg VOM/hr.

E_o = Mass rate of VOM, less methane and ethane, discharged to the atmosphere, kg VOM/hr.

C) The mass rates of VOM (E_i, E_o) shall be computed using the following formula:

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij}\right) Q_i$$

$$E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj}\right) Q_o$$

where:

C_{ij}, C_{oj} = Concentration of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, dry basis, ppmv.

M_{ij}, M_{oj} = Molecular weight of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, grams per gram-mole.

Q_i, Q_o = Flow rate of gas stream at the inlet and outlet of the

control device, respectively, dry scm/min.

K_2 = 2.494×10^{-6} (liters per minute)(gram-mole per scm)(kg/g)(min/hr), where standard temperature for (gram-mole per scm) is 20°C.

D) The representative VOM concentration (C_{VOM}) is the sum of each of the individual components of VOM (Cj) and shall be computed for each run using the following:

$$C_{VOM} = \sum_{j=1}^{n} C_j$$

where:

C_{VOM} = Concentration of VOM (minus methane and ethane), dry basis, ppmv.

C_j = Concentration of sample component "j", dry basis, ppmv.

n = Number of components in the sample.

5) When a boiler or process heater with a design heat input capacity of 44 megawatts or greater, or a boiler or process heater into which the process vent stream is introduced with the primary fuel, is used to comply with the control requirements, an initial performance test is not required.

d) When a flare is used to comply with the control requirements of this rule, the flare shall comply with the requirements of 40 CFR 60.18, incorporated by reference at Section 219.112 of this Part.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 219.434 Monitoring Requirements

a) The owner or operator of a source subject to the control requirements in Section 219.432 of this Subpart that uses an incinerator to comply with the VOM emission limitation specified in Section 219.432 (a)(1) shall install, calibrate, maintain, and operate, according to manufacturer's specifications, a temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1

percent of the temperature measured expressed in degrees Celsius, or ±0.5°C, whichever is greater.

1) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox.

2) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

b) The owner or operator of a source that uses a flare to comply with Section 219.432(a)(2) of this Subpart shall install, calibrate, maintain and operate, according to manufacturer's specifications, a heat-sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light to indicate continuous presence of a flame.

c) The owner or operator of a source that uses a boiler or process heater with a design heat input capacity less than 44 megawatts to comply with Section 219.432(a)(1) of this Subpart shall install, calibrate, maintain and operate, according to the manufacturer's specifications, a temperature monitoring device in the firebox. The monitoring device shall be equipped with a continuous recorder with an accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5°C, whichever is greater. Any boiler or process heater in which all vent streams are introduced with primary fuel is exempt from this requirement.

d) The owner or operator of a process vent with a TRE index value of 4.0 or less that uses one or more product recovery devices shall install either an organic monitoring device equipped with a continuous recorder or the monitoring equipment specified in subsections (d)(1), (d)(2), (d)(3) or (d)(4) of this Section, depending on the type of recovery device used. All monitoring equipment shall be installed, calibrated and maintained according to the manufacturer's specifications.

1) Where an absorber is the final recovery device in the recovery system, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each equipped with a continuous recorder, shall be used.

2) Where a condenser is the final recovery device in the recovery system, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1

percent of the temperature being monitored expressed in degrees Celsius or ±0.5°C, whichever is greater.

3) Where a carbon adsorber is the final recovery device in the recovery system, an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius of ±0.5°C, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle.

4) Where a scrubber is used with an incinerator, boiler, or, in the case of halogenated vent streams, a process heater, the following monitoring equipment is required for the scrubber:

A) A pH monitoring device equipped with a continuous recorder to monitor the pH of the scrubber effluent; and

B) Flow meters equipped with a continuous recorder at the scrubber influent for liquid flow and the scrubber inlet for gas stream flow.

e) The owner or operator of a process vent using a vent system that contains bypass lines capable of diverting a vent stream away from the control device associated with a process vent shall comply with either (e)(1) or (e)(2) of this Section. Equipment needed for safety purposes, including, but not limited to, pressure relief devices, are not subject to this subsection.

1) The owner or operator shall install, calibrate, maintain and operate a flow indicator that provides a record of vent stream flow at least once every 15 minutes. The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.

2) The owner or operator shall secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed

position and the vent stream is not diverted through the bypass line.

f) The owner or operator of a process vent may monitor by an equivalent alternative means or parameters other than those listed in subsections (a) through (d) of this Section. Any equivalent alternative shall be approved by the Agency and USEPA, and contained in the source's operating permit as federally enforceable permit conditions.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 219.435 Recordkeeping and Reporting Requirements

a) Every owner or operator of a reactor or distillation unit with a TRE index value of 4.0 or less shall keep records, for a minimum of 3 years, of the following parameters measured during a performance test or TRE determination required under Section 219.433 of this Subpart, and required to be monitored under Section 219.434 of this Subpart.

1) Every owner or operator of a source that seeks to demonstrate compliance with Section 219.432(a)(1) of this Subpart through the use of either a thermal or catalytic incinerator shall maintain records of the following:

A) The average firebox temperature of the incinerator (or the average temperature upstream and downstream of the catalyst bed for a catalytic incinerator), measured at least every 15 minutes and averaged over the same time period of the performance testing; and

B) The percent reduction of VOM determined as specified in Section 219.433(c) of this Subpart achieved by the incinerator, or the concentration of VOM (ppmv, by compound) determined as specified in Section 219.433(c) of this Subpart at the outlet of the control device, on a dry basis, corrected to 3 percent oxygen.

2) Every owner or operator of a source that seeks to demonstrate compliance with Section 219.432(a)(1) of this Subpart through the use of a boiler or process heater shall maintain the records described below. Any boiler or process heater in which all vent streams are introduced with primary fuel are exempt from these requirements.

A) A description of the location at which the vent stream is introduced into the boiler or process heater; and

B) The average combustion temperature of the boiler or process heater with a design heat input capacity of less than 44 megawatt measured at least every 15 minutes and averaged over the same time period of the performance testing.

3) Every owner or operator of a source that seeks to demonstrate compliance with Section 219.432(a)(2) of this Subpart through use of a smokeless flare, or flare design (i.e., steam-assisted, air-assisted, or nonassisted), shall maintain records of all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the performance test, continuous records of the flare pilot flame monitoring, and records of all periods of operations during which the pilot flame is absent.

4) Every owner or operator of a source that seeks to demonstrate compliance with Section 219.432(b) of this Subpart shall maintain records of the following:

A) Where an absorber is the final recovery device in the recovery system, the exit specific gravity (or alternative parameter which is a measure of the degree of absorbing liquid saturation, if approved by the Agency and USEPA, and average exit temperature of the absorbing liquid measured at least every 15 minutes and averaged over the same time period as the performance testing (both measured while the vent stream is normally routed and constituted);

B) Where a condenser is the final recovery device in the recovery system, the average exit (product side) temperature measured at least every 15 minutes and averaged over the same time period as the performance testing while the vent stream is normally routed and constituted;

C) Where a carbon adsorber is the final recovery device in the recovery system, the total stream mass or volumetric flow measured at least every 15 minutes and averaged over the same time period as the performance testing

(full carbon bed cycle), the temperature of the carbon bed after regeneration (and within 15 minutes of completion of any cooling cycle(s)), and duration of the carbon bed steaming cycle (all measured while the vent stream is normally routed and constituted);

D) As an alternative to subsection (a)(4)(A), (a)(4)(B) or (a)(4)(C) of this Section, the concentration level or reading indicated by the organic monitoring device at the outlet of the absorber, condenser, or carbon absorber, measured at least every 15 minutes and averaged over the same time period as the performance testing (measured while the vent stream is normally routed and constituted); or

E) All measurements and calculations performed to determine the flow rate, VOM concentration, heating value, and TRE index value of the vent stream.

b) Every owner or operator of a reactor or distillation unit with a TRE index value of less than 4.0 shall be subject to the exceedance reporting requirements of the draft Enhanced Monitoring Guidelines as published at 58 Fed. Reg. 54648 (October 22, 1993).

c) Every owner or operator of a source seeking to comply with Section 219.432(b) of this Subpart shall maintain records of the following:

1) Any changes in production capacity, feedstock type, catalyst type, or of any replacement, removal, or addition of recovery equipment or reactors and distillation units; and

2) Any recalculation of the flow rate, VOM concentration, or TRE index value calculated according to Section (c) of Appendix G of this Part.

d) Every owner or operator of a source claiming a design capacity of less than 1 gigagram (1,100 tons) per year, as contained in Section 219.431(b) of this Subpart, shall maintain records of the design capacity or any changes in equipment or operations that may affect the design capacity.

e) Every owner or operator of a source claiming a vent stream flow rate or vent stream concentration exemption level, as contained in Section 219.431(b)(5) of this Subpart, shall maintain records to indicate that the

stream flow rate is less than 0.0085 scm/min or the vent stream concentration is less than 500 ppmv.

(Source: Added at _____ Ill. Reg. _____, effective ___ _____)

Section 219.436 Compliance Date

Every owner or operator of an source subject to Sections 219.431, 219.432, 219.433, 219.434 or 219.435 of this Subpart shall comply with its standards, limitations and mandates by March 15, 1996.

(Source: Added at _____ Ill. Reg. _____, effective ___ _____)

SUBPART FF: BAKERY OVENS

Section 219.720 Applicability

a) The provisions of this Subpart shall apply to every owner or operator of a source which operates a bakery oven, as defined at 35 Ill. Adm. Code 211.680, unless the source bakes products only for on-site human consumption or on-site retail sale.

b) Notwithstanding subsection (a) of this Section, a source is required to comply with the control requirements of this Subpart only if the source has the potential to emit 22.7 Mg (25 tons) or more of VOM per year, in the aggregate, from all emission units at the source, excluding:

1) Emission units regulated by Subparts B, E, F, H, Q, R, S, T (excluding Section 219.486 of this Part), V, X, Y, Z or BB of this Part; and

2) Emission units that are included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture coating, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.

c) Every owner or operator of a source which has limited its potential to emit below 22.7 Mg (25 tons) of VOM per year, as specified in subsection (b) of this Section, through federally enforceable permit conditions is not required to comply with this Subpart.

d) Every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart

because of the criteria in subsection (b) of this Section remains subject to the recordkeeping and reporting requirements of Section 219.728(b) of this Subpart and the certification requirements in Section 219.730(d) of this Subpart.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 219.722 Control Requirements

a) Every owner or operator of a source subject to the control requirements of this Subpart shall comply with the requirements of subsection (a)(1) or (a)(2) of this Section for each bakery oven with a rated heat input capacity of at least 2 mmbtu/hr or at least 586 kW:

1) Operate emissions capture and control equipment which achieves an overall reduction in uncontrolled VOM emissions of at least 81 percent from each such bakery oven; or

2) Provide an equivalent alternative control plan for such bakery ovens at the source which has been approved by the Agency and USEPA through federally enforceable permit conditions or as a SIP revision.

b) An owner or operator of a source subject to the control requirements of this Subpart may elect to exempt from the control requirements in subsections (a)(1) or (a)(2) and (c)(1) or (c)(2) of this Section any bakery oven with actual VOM emissions less than or equal to 15 TPY; provided that the total actual VOM emissions from all such exempt bakery ovens never exceeds 25 TPY.

c) Notwithstanding the requirements in subsection (a) of this Section, until March 15, 1998 only, a source may elect to comply with the control requirements in subsection (c)(1) or (c)(2) of this Section, rather than the control requirements in subsection (a)(1) or (a)(2) of this Section, if all emission units at the source, in the aggregate, excluding emission units regulated by Subparts B, E, F, H (excluding Section 219.405 of this Subpart), Q, R, S, T (excluding Section 219.486 of this Subpart), V, X, Y, Z or BB of this Subpart, have maximum theoretical emissions of less than 90.7 Mg (100 tons) of VOM per year or are limited to less than 90.7 Mg (100 tons) of VOM emissions per calendar year in the absence of air pollution control equipment through production or capacity limitations contained in federally enforceable permit conditions or in a SIP revision:

1) Operate emissions capture and control equipment which achieves an overall reduction in uncontrolled VOM emissions of at least 60 percent from each bakery oven with a rated heat input capacity of at least 2 mmbtu/hr or at least 586 KW; or

2) Provide an equivalent alternative control plan for such bakery ovens at the source which has been approved by the Agency and USEPA through federally enforceable permit conditions or as a SIP revision.

d) Any bakery oven that becomes subject to the requirements of this Subpart at any time shall remain subject to the requirements of this Subpart at all times thereafter.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 219.726 Testing

a) Upon request by the Agency, the owner or operator of a bakery oven shall, at its own expense, conduct such tests in accordance with the applicable test methods and procedures specified in Section 219.105(f) of this Part to demonstrate compliance with the control requirements of this Subpart and shall:

1) Notify the Agency 30 days prior to conducting such tests; and

2) Submit all test results to the Agency within 45 days after conducting such tests.

b) Nothing in this Section shall limit the authority of USEPA pursuant to the Clean Air Act (CAA) to require testing, or shall affect the authority of USEPA under Section 114 of the CAA (42 U.S.C. 7414 (1990)).

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 219.727 Monitoring

a) Every owner or operator of a bakery oven subject to the control requirements of this Subpart shall install and operate at all times a device to continuously monitor the following parameters for each type of control device as follows:

1) For catalytic oxidizers, the inlet and outlet temperatures of the oxidizer;

2) For regenerative oxidizers, the temperature in the combustion chamber; or

3) For thermal incinerators, the temperature in the combustion chamber.

b) The owner or operator may monitor with an alternative method or monitor other parameters if approved by the Agency and USEPA through federally enforceable permit conditions or as a SIP revision.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 219.728 Recordkeeping and Reporting

a) Every owner or operator of a bakery oven shall maintain the following records for the most recent consecutive 3 year period for all bakery ovens subject to the control requirements of this Subpart. Such records shall be made available to the Agency immediately upon request.

1) Parameters for control devices as monitored pursuant to Section 219.727 of this Subpart;

2) Hrs/day of operation of each bakery oven;

3) Factors necessary to calculate VOM emissions for all bakery ovens including, but not limited to, type of dough used for each yeast-leavened baked product, initial yeast percentage for each product, total fermentation time for each product, any additional percentage of yeast added, and the fermentation time of any additional yeast;

4) Calculated daily VOM emissions of each bakery oven expressed as lbs/day;

5) Total amount of each type of yeast-leavened bread product produced by each bakery oven expressed as lbs/day.

b) Every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart because of the criteria in Section 219.720(b) of this Subpart shall maintain records necessary to demonstrate that its potential to emit is less than 22.7 Mg (25 tons)of VOM per year, as specified in Section 219.720(b). Such records shall be maintained for the most recent consecutive 3 year period and shall be made available to the Agency immediately upon request.

c) Every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart

because of the criteria specified in Section 219.722(b) of this Subpart shall:

1) Maintain records necessary to demonstrate that the actual VOM emissions from exempt bakery ovens are less than or equal to 15 TPY for each bakery oven and less than or equal to 25 TPY from all exempt bakery ovens combined. Such records shall be maintained for the most recent consecutive 3 year period and shall be made available to the Agency immediately upon request; and

2) Notify the Agency in writing if the actual VOM emissions from an exempt bakery oven ever exceed 15 TPY or the actual VOM emissions from a combination of exempt bakery ovens ever exceed 25 TPY, within 30 days after the exceedance occurs. Such notice shall include a copy of all records of the exceedance.

d) Every owner or operator of a bakery oven which is controlling emissions as provided in Section 219.722(c) of this Subpart until March 15, 1998, shall maintain records necessary to demonstrate that its maximum theoretical emissions as specified in Section 219.722(c) are less than 90.7 Mg (100 tons) of VOM per year. Such records shall be maintained for the most recent consecutive 3 year period and shall be made available to the Agency immediately upon request.

(Source: Added at _____ Ill. Reg. _____, effective ___ _____)

Section 219.729 Compliance Date

On and after March 15, 1996, upon initial startup or upon modification, every owner or operator of a source subject to this Subpart shall comply with the requirements of this Subpart.

(Source: Added at _____ Ill. Reg. _____, effective ___ _____)

Section 219.730 Certification

a) Every owner or operator of a source subject to the control requirements of this Subpart shall certify compliance with this Subpart on or before a date consistent with Section 219.729 of this Subpart.

b) If an owner or operator of a bakery oven subject to the control requirements of this Subpart changes the method of compliance, the owner or operator shall certify compliance with the requirements of this Subpart for

the alternative method upon changing the method of compliance.

c) All certifications of compliance with this Subpart shall include the results of all tests and the calculations performed to demonstrate that each oven at the source is in compliance with, or is exempt from, the control requirements of this Subpart. The certification shall include the following:

1) The name and identification number of each oven and any associated capture and control device;

2) The maximum rated heat input of each oven;

3) A classification of each oven as either a "bakery oven" as defined in 35 Ill. Adm. Code 211.680 or an oven used exclusively to bake non-yeast-leavened products;

4) The capture and control efficiency of each bakery oven control device;

5) Test reports, calculations and other data necessary to demonstrate that the capture and control efficiency of each bakery oven control device achieves an overall reduction in uncontrolled VOM emissions of at least 81 percent; and

6) The date each bakery oven control device was installed and operating.

d) On or before March 15, 1996, or upon initial startup, every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart because of the criteria in Section 219.720(b) of this Subpart shall certify that its potential to emit is less than 22.7 Mg (25 tons) of VOM per year, as specified in Section 219.720(b).

e) On or before March 15, 1996, or upon initial startup, every owner or operator of a bakery oven which is exempt from the control requirements of this Subpart because of the criteria specified in Section 219.722(b) of this Subpart shall certify that actual VOM emissions from any individual exempt bakery oven never exceed 15 TPY and that VOM emissions from all exempt bakery ovens, in the aggregate, never exceed 25 TPY.

f) On or before March 15, 1996, or upon initial startup if prior to March 15, 1998, every owner or operator of a bakery oven which is controlling emissions as provided by Section 219.722(c) of this Subpart, shall certify

that its maximum theoretical emissions as specified in Section 219.722(c) are less than 90.7 Mg (100 tons) of VOM per year.

(Source: Added at _____ Ill. Reg. _____, effective ___ _____)

SUBPART PP: MISCELLANEOUS FABRICATED PRODUCT MANUFACTURING PROCESSES

Section 219.926 Control Requirements

Every owner or operator of ~~a~~ miscellaneous fabricated product manufacturing process emission unit subject to this Subpart shall comply with the requirements of subsection (a), (b) or (c) of this Section:

a) Emission capture and control techniques which achieve an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit, or

(Board Note: For the purpose of this provision, an emission unit is any part or activity at a source of a type that by itself is subject to control requirements in other Subparts of this Part or 40 CFR 60, incorporated by reference in Section 219.112, e.g., a coating line, a printing line, a process unit, a wastewater system, or other equipment, or is otherwise any part or activity at a source.)

b) For coating lines, the daily-weighted average VOM content shall not exceed 0.42 kg VOM/l (3.5 lbs VOM/gal) of coating as applied (minus water and any compounds which are specifically exempted from the definition of VOM) during any day. Owners and operators complying with this Section are not required to comply with Section 219.301 of this Part, or

c) An equivalent alternative control plan which has been approved by the Agency and the USEPA in a federally enforceable permit or as a SIP revision.

(Source: Amended at ___ Ill. Reg. ____, effective _____)

SUBPART QQ: MISCELLANEOUS FORMULATION MANUFACTURING PROCESSES

Section 219.946 Control Requirements

Every owner or operator of a miscellaneous formulation manufacturing process emission unit subject to this Subpart shall comply with the requirements of subsection (a) or (b) ~~below~~of this Section.

a) Emission capture and control techniques which achieve an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit, or

(Board Note: For the purpose of this provision, an emission unit is any part or activity at a source of a type that by itself is subject to control requirements in other Subparts of this Part or 40 CFR 60, incorporated by reference in Section 219.112, e.g., a coating line, a printing line, a process unit, a wastewater system, or other equipment, or is otherwise any part or activity at a source.)

b) An equivalent alternative control plan which has been approved by the Agency and the USEPA in a federally enforceable permit or as a SIP revision.

(Source: Amended at ___ Ill. Reg. _____, effective _____ ___)

SUBPART RR: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING PROCESSES

Section 219.966 Control Requirements

Every owner or operator of an miscellaneous organic chemical manufacturing process emission unit, subject to this Subpart shall comply with the requirements of subsection (a), (b), or (c) ~~below~~of this Section.

a) Emission capture and control techniques which achieve an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit, or

(Board Note: For the purpose of this provision, an emission unit is any part or activity at a source of a type that by itself is subject to control requirements in other Subparts of this Part or 40 CFR 60, incorporated by reference in Section 219.112, e.g., a coating line, a printing line, a process unit, a wastewater system, or other equipment, or is otherwise any part or activity at a source.)

b) An equivalent alternative control plan which has been approved by the Agency and the USEPA in a federally enforceable permit or as a SIP revision.

c) Any leaks from components subject to the control requirements of this Subpart shall be subject to the following control measures by March 15, 1995:

1) Repair any component from which a leak of VOL can be observed. The repair shall be completed as soon as practicable but no later than 15 days after the leak is found, unless the leaking

component cannot be repaired until the next process unit shutdown, in which case the leaking component must be repaired before the unit is restarted.

2) For any leak which cannot be readily repaired within one hour after detection, the following records, as set forth in this subsection, shall be kept. These records shall be maintained by the owner or operator for a minimum of two years after the date on which they are made. Copies of the records shall be made available to the Agency or USEPA upon verbal or written request.

A) The name and identification of the leaking component;

B) The date and time the leak is detected;

C) The action taken to repair the leak; and

D) The date and time the leak is repaired.

SUBPART TT: OTHER EMISSION UNITS

Section 219.980 Applicability

a) The requirements of this Subpart shall apply to a source's VOM emission units, which are not included within any of the categories specified in Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z, AA, BB, PP, QQ, or RR of this Part, or are not exempted from permitting requirements pursuant to 35 Ill. Adm. Code 201.146, if the source is subject to this Subpart. A source is subject to this Subpart if it contains process emission units, not regulated by Subparts B, E, F (excluding Section 219.204(l) of this Part), H (excluding Section 219.405 of this Part), Q, R, S, T, (excluding Section 218.486 of this Part), V, X, Y, Z or BB of this Part, which as a group both:

1) Have maximum theoretical emissions of 91 Mg (100 tons) or more per calendar year of VOM if no air pollution control equipment were used, and

2) Are not limited to less than 91 Mg (100 tons) of VOM emissions per calendar year in the absence of air pollution control equipment, through production or capacity limitations contained in a federally enforceable permit or a SIP revision.

b) If a source ceases to fulfill the criteria of subsection (a) of this Section, the requirements of this Subpart shall continue to apply to an emission

unit which was ever subject to the control requirements of Section 219.986 of this Part.

c) No limits under this Subpart shall apply to emission units with emissions of VOM to the atmosphere less than or equal to 2.3 Mg (2.5 tons) per calendar year if the total emissions from such emission unit not complying with Section 219.986 of this Part does not exceed 4.5 Mg (5.0 tons) per calendar year.

d) For the purposes of this Subpart, an emission unit shall be considered regulated by a Subpart if it is subject to the limits of that Subpart. An emission unit is not considered regulated by a Subpart if it is not subject to the limits of that Subpart, e.g., the emission unit is covered by an exemption in the Subpart or the applicability criteria of the Subpart are not met.

e) The control requirements in Subpart TT shall not apply to sewage treatment plants; vegetable oil extraction and processing; coke ovens (including by-product recovery); fuel combustion units; bakeries; barge loading facilities; jet engine test cells; production of polystyrene foam insulation board including storage and extrusion of scrap where blowing agent is added to the polystyrene resin at the source, but not including blending and preliminary expansion of resin prior to molding where a blowing agent is incorporated into the polystyrene resin by the producer of the resin; production of polystyrene or polyethylene foam packaging not including blending and preliminary expansion of resin prior to molding where blowing agent is incorporated into the polystyrene resin by the producer of the resin; and not including storage and extrusion of scrap where blowing agent is added to the polystyrene resin at the source; and iron and steel production.

(Source: Amended at _____ Ill. Reg. _____, effective _____)

Section 219.986 Control Requirements

Every owner or operator of an emission unit subject to this Subpart shall comply with the requirements of subsection (a), (b), (c), (d) or (e) ~~below~~of this Section.

a) Emission capture and control equipment which achieve an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit, or

(Board Note: For the purpose of this provision, an emission unit is any part or activity at a source of a

type that by itself is subject to control requirements in other Subparts of this Part or 40 CFR 60, incorporated by reference in Section 219.112, e.g., a coating line, a printing line, a process unit, a wastewater system, or other equipment, or is otherwise any part or activity at a source.)

b) For coating lines, the daily-weighted average VOM content shall not exceed 0.42 kg VOM/l (3.5 lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied during any day. Owners and operators complying with this Section are not required to comply with Section 219.301 of this Part, or

c) An equivalent alternative control plan which has been approved by the Agency and the USEPA in a federally enforceable permit or as a SIP revision.

d) Non-contact process water cooling towers which are subject to the control requirements of this Subpart shall comply with the following control measures no later than March 15, 1995 or upon initial startup:

1) The owner or operator of a non-contact process water cooling tower shall perform the following actions to control emissions of volatile organic material (VOM) from such a tower:

A) Inspect and monitor such tower to identify leaks of VOM into the water, as further specified in subsection (d)(3) ~~below~~of this Section;

B) When a leak is identified, initiate and carry out steps to identify the specific leaking component or components as soon as practicable, as further specified in subsection (d)(4) ~~below~~of this Section;

C) When a leaking component is identified which:

i) Can be removed from service without disrupting production, remove the component from service;

ii) Cannot be removed from service without disrupting production, undertake repair of the component at the next reasonable opportunity to do so including any period when the component is out of service for scheduled maintenance, as further specified in subsection (d)(4) ~~below~~of this Section;

D) Maintain records of inspection and monitoring activities, identification of leaks and leaking components, elimination and repair of leaks, and operation of equipment as related to these activities, as further specified in subsection (d)(5) ~~below~~of this Section.

2) A VOM leak shall be considered to exist in a non-contact process water cooling water system if the VOM emissions or VOM content exceed background levels as determined by monitoring conducted in accordance with subsection (d)(3)(A) ~~below~~of this Section.

3) The owner or operator of an non-contact process water cooling tower shall carry out an inspection and monitoring program to identify VOM leaks in the cooling water system.

A) The owner or operator of a non-contact process water cooling tower shall submit to the Agency a proposed monitoring program, accompanied by technical justification for the program, including justification for the sampling, location(s), parameter(s) selected for measurement, monitoring and inspection frequency, and the criteria used relative to the monitored parameters to determine whether a leak exists as specified in subsection (d)(2) ~~above~~of this Section.

B) This inspection and monitoring program for non-contact process water cooling towers shall include, but shall not be limited to:

i) Monitoring of each such tower with a water flow rate of 25,000 gallons per minute or more at a petroleum refinery at least weekly and monitoring of other towers at least monthly;

ii) Inspection of each such tower at least weekly if monitoring is not performed at least weekly.

C) This inspection and monitoring program shall be carried out in accordance with written procedures which the Agency shall specify as a condition in a federally enforceable operating permit. These procedures shall include the VOM background levels for the cooling tower as established by the owner or operator through monitoring; describe the locations at which samples will be taken;

identify the parameter(s) to be measured, the frequency of measurements, and the procedures for monitoring each such tower, that is, taking of samples and other subsequent handling and analyzing of samples; provide the criteria used to determine that a leak exists as specified in subsection (d)(2) ~~above~~of this Section; and describe the records which will be maintained.

D) A non-contact process water cooling tower is exempt from the requirements of subsections (d)(3)(B) and (d)(3)(C) ~~above~~of this Section, if all equipment, where leaks of VOM into cooling water may occur, is operated at a minimum pressure in the cooling water of at least 35 kPa greater than the maximum pressure in the process fluid.

4) The repair of a leak in a non-contact process water cooling tower shall be considered to be completed in an acceptable manner as follows:

A) Efforts to identify and locate the leaking components are initiated as soon as practicable, but in no event later than three days after detection of the leak in the cooling water tower;

B) Leaking components shall be repaired or removed from service as soon as possible but no later than 30 days after the leak in the cooling water tower is detected, unless the leaking components cannot be repaired until the next scheduled shutdown for maintenance.

5) The owner or operator of a non-contact process water cooling tower shall keep records as set forth below in this subsection. These records shall be retained at a readily accessible location at the source and shall be available for inspection and copying by the Agency for at least 3 years:

A) Records of inspection and monitoring activity;

B) Records of each leak identified in such tower, with date, time and nature of observation or measured level of parameter;

C) Records of activity to identify leaking components, with date initiated, summary of

components inspected with dates, and method of inspection and observations;

D) Records of activity to remove a leaking component from service or repair a leaking component, with date initiated and completed, description of actions taken and the basis for determining the leak in such tower has been eliminated. If the leaking component is not identified, repaired or eliminated within 30 days of initial identification of a leak in such tower, this report shall include specific reasons why the leak could not be eliminated sooner including all other intervening periods when the process unit was out of service, actions taken to minimize VOM losses prior to elimination of the leak and any actions taken to prevent the recurrence of a leak of this type.

6) The owner or operator of a non-contact process water cooling tower shall submit an annual report to the Agency which provides:

A) The number of leaks identified in each cooling tower;

B) A general description of activity to repair or eliminate leaks which were identified;

C) Identification of each leak which was not repaired in 30 days from the date of identification of a leak in such a tower, with description of the leaks, explanation why the leak was not repaired in 30 days;

D) Identification of any periods when required inspection and monitoring activities were not carried out.

e) Any leaks from components subject to the control requirements of this Subpart shall be subject to the following control measures by March 15, 1995:

1) Repair any component from which a leak of VOL can be observed. The repair shall be completed as soon as practicable but no later than 15 days after the leak is found, unless the leaking component cannot be repaired until the next process unit shutdown, in which case the leaking component must be repaired before the unit is restarted.

2) For any leak which cannot be readily repaired within one hour after detection, the following records, as set forth below in this subsection, shall be kept. These records shall be maintained by the owner or operator for a minimum of two years after the date on which they are made. Copies of the records shall be made available to the Agency or USEPA upon verbal or written request.

A) The name and identification of the leaking component;

B) The date and time the leak is detected;

C) The action taken to repair the leak; and

D) The date and time the leak is repaired.

(Source: Amended at ___ Ill. Reg. _____, effective _____ ___)

Section 219.Appendix G TRE Index Measurements for SOCMI Reactors and Distillation Units

For purposes of Subpart Q, Sections 219.431 through 219.435, the following apply:

a) The following test methods shall be used to determine compliance with the total resource effectiveness ("TRE") index value:

1) Method 1 or 1A, incorporated by reference at Section 219.112 of this Part, as appropriate, for selection of the sampling site.

A) The sampling site for the vent stream molar composition determination and flow rate prescribed in subsections (a)(2) and (a)(3) of this Appendix shall be, except for the situations outlined in subsection (a)(1)(B), after the final recovery device, if a recovery system is present, prior to the inlet of any control device, and prior to any post-reactor or post-distillation unit introduction of halogenated compounds into the vent stream. No traverse site selection method is needed for vents smaller than 10 cm in diameter.

B) If any gas stream other than the reactor or distillation unit vent stream is normally conducted through the final recovery device:

i) The sampling site for vent stream flow rate and molar composition shall be prior to the final recovery device and prior to the point at which any nonreactor or nondistillation unit vent stream or stream from a nonaffected reactor or distillation unit is introduced. Method 18 incorporated by reference at Section 219.112 of this Part, shall be used to measure organic compound concentrations at this site.

ii) The efficiency of the final recovery device is determined by measuring the organic compound concentrations using Method 18, incorporated by reference at Section 219.112 of this Part, at the inlet to the final recovery device after the introduction of all vent streams and at the outlet of the final recovery device.

iii) The efficiency of the final recovery device determined according to subsection (a)(1)(B)(ii) of this Appendix shall be applied to the organic compound concentrations measured according to subsection (a)(1)(B)(i) of this Appendix to determine the concentrations of organic compounds from the final recovery device attributable to the reactor or distillation unit vent stream. The resulting organic compound concentrations are then used to perform the calculations outlined in subsection (a)(4) of this Appendix.

2) The molar composition of the vent stream shall be determined as follows:

A) Method 18, incorporated by reference at Section 219.112 of this Part, to measure the concentration of organic compounds including those containing halogens;

B) ASTM D1946-77, incorporated by reference at Section 219.112 of this Part, to measure the concentration of carbon monoxide and hydrogen; and

C) Method 4, incorporated by reference at Section 219.112 of this Part, to measure the content of water vapor.

3) The volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D, incorporated by reference at Section 219.112 of this Part, as appropriate.

4) The emission rate of VOM (minus methane and ethane) (E_{VOM}) in the vent stream shall be calculated using the following formula:

$$E_{VOM} = K_2 \sum_{j=1}^{n} C_j M_j Q_s$$

where:

E_{VOM} = Emission rate of VOM (minus methane and ethane) in the sample, kg/hr.

K_2 = Constant, 2.494×10^{-6} (l/ppmv)(g-mole/scm)(kg/g)(min/hr), where standard temperature for (g-mole/scm) is 20°C.

C_j = Concentration of compound j, on a dry basis, in ppmv as measured by Method 18, incorporated by reference at Section 219.112 of this Part, as indicated in Section 219.433(c)(3) of this Part.

M_j = Molecular weight of sample j, g/g-mole.

Q_s = Vent stream flow rate (scm) at a temperature of 20°C.

5) The total vent stream concentration (by volume) of compounds containing halogens (ppmv, by compound) shall be summed from the individual concentrations of compounds containing halogens which were measured by Method 18, incorporated by reference at Section 219.112 of this Part.

6) The net heating value of the vent stream shall be calculated using the following:

$$H_T = K_1 \sum_{j=1}^{n} C_j H_j (1-B_{ws})$$

where:

H_T = Net heating value of the sample (MJ/scm, where the net enthaply per mole of vent stream is based on combustion of 25°C and 760 mmHG, but the standard temperature for determining the volume corresponding to one mole is 25°C, as in

the definition of Q_s (vent stream flow rate).

K_1 = Constant, 1.740×10^{-7} $(ppmv)^{-1}$ (g-mole/scm), (MJ/KCal), where standard temperature for (g-mole/scm) is 20°C.

B_{ws} = Water vapor content of the vent stream, proportion by volume; except that if the vent stream passes through a final stream jet and is not condensed, it shall be assumed that $B_{ws} = 0.023$ in order to correct to 2.3 percent moisture.

C_j = Concentration on a dry basis of compound j in ppmv, as measured for all organic compounds by Method 18, incorporated by reference at Section 219.112 of this Part, and measured for hydrogen and carbon monoxide by using ASTM D1946-77, incorporated by reference at Section 219.112 of this Part.

H_j = Net heat of combustion of compound j, kCal/g-mole, based on combustion at 25°C and 760 mmHG. The heats of combustion of vent stream components shall be determined using ASTM D2382-83, incorporated by reference at Section 219.112 of this Part, if published values are not available or cannot be calculated.

b) 1) The TRE index value of the vent shall be calculated using the following:

$$TRE = \frac{1}{E_{VOM}} [a + b (Q_s) + c (H_T) + d (E_{VOM})]$$

where:

TRE = TRE index value.

E_{VOM} = Hourly emission rate of VOM (kg/hr) as calculated in subsection (a)(4) of this Appendix.

Q_s = Vent stream flow rate scm/min at a standard temperature of 20°C.

H_T = Vent stream net heating value (MJ/scm), as calculated in subsection (a)(6) of this Appendix.

E_{VOM} = Hourly emission rate of VOM (minus methane and ethane), (kg/hr) as calculated in subsection (a)(4) of this Appendix.

a,b, c,d = Value of coefficients presented below are:

Type of Stream	Control Device Basis	Value of Coefficients a	b	c	d
Nonhalogenated	Flare	2.129	0.183	-0.005	0.359
	Thermal incinerator zero (0) Percent heat Recovery	3.075	0.021	-0.037	0.018
	Thermal incinerator 70 Percent heat Recovery	3.803	0.032	-0.042	0.007
Halogenated	Thermal incinerator and scrubber	5.470	0.181	-0.040	0.00

2) Every owner or operator of a vent stream shall use the applicable coefficients identified for values a, b, c and d in subsection (b)(1) of this Appendix to calculate the TRE index value based on a flare, a thermal incinerator with zero percent heat recovery, and a thermal incinerator with 70 percent heat recovery, and shall select the lowest TRE index value.

3) Every owner or operator of a reactor or distillation unit with a halogenated vent stream, determined as any stream with a total concentration of halogen atoms contained in organic compounds of 200 ppmv or greater, shall use the applicable coefficients identified for values a, b, c and d in subsection (b)(1) of this Appendix to calculate the TRE index value based on a thermal incinerator and scrubber.

c) Every owner or operator of a source seeking to comply with Section 219.432(b) of this Part shall recalculate the flow rate and VOM concentration for each affected vent stream whenever process changes are made. Examples of process changes include, but are not limited to, changes in production capacity, feedstock type, or catalyst type, or whenever there is

replacement, removal, or addition of recovery equipment. The flow rate and VOM concentration shall be recalculated based on test data, or on best engineering estimates of the effects of the change to the recovery system.

d) Whenever a process change, as defined in Section 219.435(c) of this Subpart, yields a TRE index value of 1.0 or less, the owner or operator shall notify and submit a report to the Agency according to the requirements specified in Section 219.435(c) of this Subpart, within 180 calendar days after the process change and shall conduct a performance test according to the methods and procedures required by Section 219.433 of this Part.

e) For the purpose of demonstrating that a process vent stream has a VOM concentration below 500 ppmv, the following shall be used:

1) The sampling site shall be selected as specified in Section 219.433(c)(1) of this Part.

2) Method 18 or Method 25A of 40 CFR Part 60, Appendix A, incorporated by reference at Section 219.112 of this Part, shall be used to measure concentration; alternatively, any other method or data that has been validated according to the protocol in Method 301 of 40 CFR Part 63, Appendix A, incorporated by reference at Section 219.112 of this Part, may be used.

3) Where Method 18 is used, the following procedures shall be used to calculate ppmv concentration:

i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

ii) The concentration of VOM shall be calculated using Method 18 according to Section 219.433(c)(4) of this Part.

4) Where Method 25A is used, the following procedures shall be used to calculate ppmv VOM concentration:

i) Method 25A shall be used only if a single VOM is greater than 50 percent of total VOM, by volume, in the process vent stream.

ii) The vent stream composition may be determined by either process knowledge, test data collected using an appropriate Reference Method or a method of data collection validated according to the protocol in Method 301 of 40 CFR Part 63, Appendix A, incorporated by reference at Section 219.112 of this Part. Examples of information that constitute process knowledge include calculations based on material balances, process stoichiometry, or previous test results provided the results are still relevant to the current process vent stream conditions.

iii) The VOM used as the calibration gas for Method 25A shall be the single VOM present at greater than 50 percent of the total VOM by volume.

iv) The span value for Method 25A shall be 50 ppmv.

v) Use of Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

vi) The concentration of VOM shall be corrected to 3 percent oxygen using the procedures and equation in Section 219.433(c)(3) of this Part.

5) The owner or operator shall demonstrate that the concentration of VOM, including methane and ethane, measured by Method 25A is below 250 ppmv to qualify for the low concentration exclusion in Section 219.431 of this Part.

(Source: Added at _____ Ill. Reg. _____, effective _____)

Section 219.Appendix H Baseline VOM Content Limitations for Subpart F, Section 219.212 Cross-Line Averaging

This Appendix contains limitations for purposes of determining compliance with the requirements in Section 219.212 of this Part. A source must establish that, at very least, each participating coating line used for purposes of cross-line averaging meets the Federal Implementation Plan level of VOM content, as listed

below. The emission limitations for participating coating lines that must not be exceeded are as follows:

		kg/l	lb/gal
a)	Automobile or Light-Duty Truck Coating		
1)	Prime coat	0.14	(1.2)
2)	Primer surface coat	1.81	(15.1)

(Note: The primer surface coat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire primer surface operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 219.105(b) and the recordkeeping and reporting requirements specified in Section 219.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 219.205 does not apply to the primer surface limitation.)

		kg/l	lb/gal
3)	Topcoat	1.81	(15.1)

(Note: The topcoat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire topcoat operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 219.105(b) of this Part and the recordkeeping and reporting requirements specified in Section 219.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 219.205 of this Part does not apply to the topcoat limitation.)

		kg/l	lb/gal
4)	Final repair coat	0.58	(4.8)
b)	Can Coating	kg/l	lb/gal
1)	Sheet basecoat and overvarnish	0.34	(2.8)

2)	Exterior basecoat and overvarnish	0.34	(2.8)
3)	Interior body spray coat	0.51	(4.2)
4)	Exterior end coat	0.51	(4.2)
5)	Side seam spray coat	0.66	(5.5)
6)	End sealing compound coat	0.44	(3.7)

		kg/l	lb/gal
c)	Paper Coating	0.35	(2.9)

(Note: The paper coating limitation shall not apply to any owner or operator of any paper coating line on which printing is performed if the paper coating line complies with the emissions limitations in Subpart H: Printing and Publishing, Section 219.401 of this Part.)

		kg/l	lb/gal
d)	Coil Coating	0.31	(2.6)
e)	Fabric Coating	0.35	(2.9)
f)	Vinyl Coating	0.45	(3.8)
g)	Metal Furniture Coating		
1)	Air Dried	0.36	(3.0)
2)	Baked	0.36	(3.0)
h)	Large Appliance Coating		
1)	Air Dried	0.34	(2.8)
2)	Baked	0.34	(2.8)

(Note: The limitation shall not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 0.95 l (1 quart) in any one rolling eight-hour period.)

		kg/l	lb/gal
i)	Magnet Wire Coating	0.20	(1.7)
j)	Miscellaneous Metal Parts and Products Coating		
1)	Clear coating	0.52	(4.3)
2)	Extreme performance		

		coating		
		A) Air Dried	0.42	(3.5)
		B) Baked	0.42	(3.5)
	3)	Steel pail and drum interior coating	0.52	(4.3)
	4)	All other coatings		
		A) Air Dried	0.42	(3.5)
		B) Baked	0.36	(3.0)
k)	Heavy Off-Highway Vehicle Products Coating		kg/l	lb/gal
	1)	Extreme performance prime coat	0.42	(3.5)
	2)	Extreme performance top-coat (air dried)	0.42	(3.5)
	3)	Final repair coat (air dried)	0.42	(3.5)
	4)	All other coatings are subject to the emission limitations for miscellaneous metal parts and products coatings in subsection (j) above.		
l)	Wood Furniture Coating		kg/l	lb/gal
	1)	Clear topcoat	0.67	(5.6)
	2)	Opaque stain	0.56	(4.7)
	3)	Pigmented coat	0.60	(5.0)
	4)	Repair coat	0.67	(5.6)
	5)	Sealer	0.67	(5.6)
	6)	Semi-transparent stain	0.79	(6.6)
	7)	Wash coat	0.73	(6.1)

(Note: An owner or operator of a wood furniture coating operation subject to this Section shall apply all coatings, with the exception of no more than 37.8 l (10 gal) of coating per day used for touch-up and repair operations, using one or more of the following application systems: airless spray application system, air-assisted airless

spray application system, electrostatic spray application system, electrostatic bell or disc spray application system, heated airless spray application system, roller coating, brush or wipe coating application system, dip coating application system or high volume low pressure (HVLP) application system.)

m) Plastic Parts Coating: Automotive/Transportation

			kg/l	lb/gal
1)	Interiors			
	A)	Baked		
		i) Color coat	0.49*	(4.1)*
		ii) Primer	0.46*	(3.8)*
	B)	Air Dried		
		i) Color coat	0.38*	(3.2)*
		ii) Primer	0.42*	(3.5)*
2)	Exteriors (flexible and non-flexible)			
	A)	Baked		
		i) Primer	0.60*	(5.0)*
		ii) Primer non-flexible	0.54*	(4.5)*
		iii) Clear coat	0.52*	(4.3)*
		iv) Color coat	0.55*	(4.6)*
	B)	Air Dried		
		i) Primer	0.66*	(5.5)*
		ii) Clear coat	0.54*	(4.5)*
		iii) Color coat (red & black)	0.67*	(5.6)*
		iv) Color coat (others)	0.61*	(5.1)*
3)	Specialty			
	A)	Vacuum metallizing	0.66*	(5.5)*

		basecoats, texture basecoats		
	B)	Black coatings, reflective argent coatings, air bag cover coatings, and soft coatings	0.71*	(5.9)*
	C)	Gloss reducers, vacuum metallizing topcoats, and texture topcoats	0.77*	(6.4)*
	D)	Stencil coatings, adhesion primers, ink pad coatings, electrostatic prep coatings, and resist coatings	0.82*	(6.8)*
	E)	Head lamp lens coatings	0.89*	(7.4)*

n) Plastic Parts Coating: Business Machine

		kg/l	lb/gal
1)	Primer	0.14*	(1.2)*
2)	Color coat (non-texture coat)	0.28*	(2.3)*
3)	Color coat (texture coat)	0.28*	(2.3)*
4)	Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings	0.48*	(4.0)*
5)	Specialty Coatings		
	A) Soft coat	0.52*	(4.3)*
	B) Plating resist	0.71*	(5.9)*
	C) Plating sensitizer	0.85*	(7.1)*

(Source: Added at _____ Ill. Reg. _____, effective _____ _____)

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 20th day of April, 1995, by a vote of 7-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board