ILLINOIS POLLUTION CONTROL BOARD
September 15, 1994

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;	)	R94-21
WOOD FURNITURE COATING; REACTOR	)	(Rulemaking)
PROCESSES AND DISTILLATION	)	
OPERATION PROCESSES IN SOCMI;	)	
AND BAKERY OVENS; AMENDMENTS TO	)	
35 ILL. ADM. CODE PARTS 211,	)	
218 AND 219	)	

Proposed Rule. First Notice.

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

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.

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 incudes 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 is accepted for hearing. (P.A. 87-1213, effective September 26, 1992; 415 ILCS 5/28.5.) 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. Therefore, the Board acts today to send this proposal to first notice under the Illinois Administrative Procedure Act without commenting on the merits of the proposal. The following schedule[1] indicates the deadlines by which the Board must act under the provisions of Section 28.5:

First Notice	on or before September 26, 1994
First Hearing	on or before November 6, 1994
Second Hearing	on or before December 6, 1994
Third Hearing	on or before December 16, 1994
Second Notice	on or before January 20, or February 9, 1995
Final Filing	21 days after receipt of JCAR certification of no objection

The Agency has filed a motion asking that the Board waive several requirements which govern the filing of a regulatory proposal. Specifically, the Agency asks that it be allowed to submit the original and five complete copies of the proposal and four partial copies of the proposal, rather than the original and nine complete copies to the Board. Further, the Agency asks that it not be required to supply the Attorney General or the Department of Energy and Natural Resources with a complete copy of the proposal. Lastly, the Agency asks that it not be required to submit documents which are readily available to the Board on which the Agency will rely at hearing. The Board grants the Agency's motion.

In the interest of administrative economy, the Board directs the Hearing Officer to verify that the persons on the Notice List in this proceeding wish to continue to receive mailings in this proceeding.

ORDER

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[1] This schedule includes a second and third hearing which may be cancelled if unnecessary. Hearings will be continued from day to day as necessary to complete the subject matter established by statute for each set of hearings.

The Board directs the Clerk to cause the filing of the following proposal for First Notice 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 A: GENERAL PROVISIONS

Section
211.101 Incorporations by Reference
211.102 Abbreviations and Units

SUBPART B: DEFINITIONS

Section
211.121 Other Definitions
211.122 Definitions (Repealed)
211.130 Accelacota
211.150 Accumulator
211.170 Acid Gases
211.210 Actual Heat Input
211.230 Adhesive
211.250 Aeration
211.270 Aerosol Can Filling Line
211.290 Afterburner
211.310 Air Contaminant
211.330 Air Dried Coatings
211.350 Air Oxidation Process
211.370 Air Pollutant
211.390 Air Pollution
211.410 Air Pollution Control Equipment
211.430 Air Suspension Coater/Dryer
211.450 Airless Spray
211.470 Air Assisted Airless Spray
211.490 Annual Grain Through-Put
211.510 Application Area
211.530 Architectural Coating
211.550 As Applied
211.570 Asphalt
211.590 Asphalt Prime Coat
211.610 Automobile
211.630 Automobile or Light-Duty Truck Assembly Source or Automobile or Light-Duty Truck Manufacturing Plant
211.650 Automobile or Light-Duty Truck Refinishing
211.660 Automotive/Transportation Plastic Parts
211.670 Baked Coatings

211.1750 Dip Coating
211.1770 Distillate Fuel Oil
211.1780 Distillation Unit
211.1790 Drum
211.1810 Dry Cleaning Operation or Dry Cleaning Facility
211.1830 Dump-Pit Area
211.1850 Effective Grate Area
211.1870 Effluent Water Separator
211.1880 Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) Shielding Coatings
211.1890 Electrostatic Bell or Disc Spray
211.1900 Electrostatic Prep Coat
211.1910 Electrostatic Spray
211.1930 Emission Rate
211.1950 Emission Unit
211.1970 Enamel
211.1990 Enclose
211.2010 End Sealing Compound Coat
211.2030 Enhanced Under-the-Cup Fill
211.2050 Ethanol Blend Gasoline
211.2070 Excess Air
211.2090 Excessive Release
211.2110 Existing Grain-Drying Operation
211.2130 Existing Grain-Handling Operation
211.2150 Exterior Base Coat
211.2170 Exterior End Coat
211.2190 External Floating Roof
211.2210 Extreme Performance Coating
211.2230 Fabric Coating
211.2250 Fabric Coating Line
211.2270 Federally Enforceable Limitations and Conditions
211.2290 Fermentation Time
211.2310 Final Repair Coat
211.2330 Firebox
211.2350 Fixed-Roof Tank
211.2360 Flexible Coating
211.2365 Flexible Operation Unit
211.2370 Flexographic Printing
211.2390 Flexographic Printing Line
211.2410 Floating Roof
211.2430 Fountain Solution
211.2450 Freeboard Height
211.2470 Fuel Combustion Emission Unit or Fuel Combustion Emission Source
211.2490 Fugitive Particulate Matter
211.2510 Full Operating Flowrate
211.2530 Gas Service
211.2550 Gas/Gas Method
211.2570 Gasoline
211.2590 Gasoline Dispensing Operation or Gasoline Dispensing Facility
211.2610 Gel Coat
211.2630 Gloss Reducers
211.2650 Grain

211.2670 Grain-Drying Operation
211.2690 Grain-Handling and Conditioning Operation
211.2710 Grain-Handling Operation
211.2730 Green-Tire Spraying
211.2750 Green Tires
211.2770 Gross Heating Value
211.2790 Gross Vehicle Weight Rating
211.2810 Heated Airless Spray
211.2830 Heatset
211.2850 Heatset-Web-Offset Lithographic Printing Line
211.2870 Heavy Liquid
211.2890 Heavy Metals
211.2910 Heavy Off-Highway Vehicle Products
211.2930 Heavy Off-Highway Vehicle Products Coating
211.2950 Heavy Off-Highway Vehicle Products Coating Line
211.2970 High Temperature Aluminum Coating
211.2990 High Volume Low Pressure (HVLP) Spray
211.3010 Hood
211.3030 Hot Well
211.3050 Housekeeping Practices
211.3070 Incinerator
211.3090 Indirect Heat Transfer
211.3110 Ink
211.3130 In-Process Tank
211.3150 In-Situ Sampling Systems
211.3170 Interior Body Spray Coat
211.3190 Internal-Floating Roof
211.3210 Internal Transferring Area
211.3230 Lacquers
211.3250 Large Appliance
211.3270 Large Appliance Coating
211.3290 Large Appliance Coating Line
211.3310 Light Liquid
211.3330 Light-Duty Truck
211.3350 Light Oil
211.3370 Liquid/Gas Method
211.3390 Liquid-Mounted Seal
211.3410 Liquid Service
211.3430 Liquids Dripping
211.3450 Lithographic Printing Line
211.3470 Load-Out Area
211.3490 Low Solvent Coating
211.3510 Magnet Wire
211.3530 Magnet Wire Coating
211.3550 Magnet Wire Coating Line
211.3570 Major Dump Pit
211.3590 Major Metropolitan Area (MMA)
211.3610 Major Population Area (MPA)
211.3630 Manufacturing Process
211.3650 Marine Terminal
211.3670 Material Recovery Section
211.3690 Maximum Theoretical Emissions
211.3710 Metal Furniture
211.3730 Metal Furniture Coating

211.3750 Metal Furniture Coating Line
211.3770 Metallic Shoe-Type Seal
211.3790 Miscellaneous Fabricated Product Manufacturing Process
211.3810 Miscellaneous Formulation Manufacturing Process
211.3830 Miscellaneous Metal Parts and Products
211.3850 Miscellaneous Metal Parts and Products Coating
211.3870 Miscellaneous Metal Parts or Products Coating Line
211.3890 Miscellaneous Organic Chemical Manufacturing Process
211.3910 Mixing Operation
211.3930 Monitor
211.3950 Monomer
211.3970 Multiple Package Coating
211.3990 New Grain-Drying Operation
211.4010 New Grain-Handling Operation
211.4030 No Detectable Volatile Organic Material Emissions
211.4050 Non-contact Process Water Cooling Tower
211.4055 Non-Flexible Coating
211.4070 Offset
211.4090 One Hundred Percent Acid
211.4110 One-Turn Storage Space
211.4130 Opacity
211.4150 Opaque Stains
211.4170 Open Top Vapor Degreasing
211.4190 Open-Ended Valve
211.4210 Operator of a Gasoline Dispensing Operation or Operator of a Gasoline Dispensing Facility
211.4230 Organic Compound
211.4250 Organic Material and Organic Materials
211.4270 Organic Vapor
211.4290 Oven
211.4310 Overall Control
211.4330 Overvarnish
211.4350 Owner of a Gasoline Dispensing Operation or Owner of a Gasoline Dispensing Facility
211.4370 Owner or Operator
211.4390 Packaging Rotogravure Printing
211.4410 Packaging Rotogravure Printing Line
211.4430 Pail
211.4450 Paint Manufacturing Source or Paint Manufacturing Plant
211.4470 Paper Coating
211.4490 Paper Coating Line
211.4510 Particulate Matter
211.4530 Parts Per Million (Volume) or PPM (Vol)
211.4550 Person
211.4590 Petroleum
211.4610 Petroleum Liquid
211.4630 Petroleum Refinery
211.4650 Pharmaceutical
211.4670 Pharmaceutical Coating Operation
211.4690 Photochemically Reactive Material
211.4710 Pigmented Coatings
211.4730 Plant
211.4740 Plastic Part
211.4750 Plasticizers

211.4770 PM-10
211.4790 Pneumatic Rubber Tire Manufacture
211.4810 Polybasic Organic Acid Partial Oxidation Manufacturing Process
211.4830 Polyester Resin Material(s)
211.4850 Polyester Resin Products Manufacturing Process
211.4870 Polystyrene Plant
211.4890 Polystyrene Resin
211.4910 Portable Grain-Handling Equipment
211.4930 Portland Cement Manufacturing Process Emission Source
211.4950 Portland Cement Process or Portland Cement Manufacturing Plant
211.4970 Potential to Emit
211.4990 Power Driven Fastener Coating
211.5030 Pressure Release
211.5050 Pressure Tank
211.5060 Primary Product
211.5070 Prime Coat
211.5090 Primer Surfacer Coat
211.5110 Primer Surfacer Operation
211.5130 Primers
211.5150 Printing
211.5170 Printing Line
211.5185 Process Emission Source
211.5190 Process Emission Unit
211.5210 Process Unit
211.5230 Process Unit Shutdown
211.5250 Process Weight Rate
211.5270 Production Equipment Exhaust System
211.5310 Publication Rotogravure Printing Line
211.5330 Purged Process Fluid
211.5350 Reactor
211.5370 Reasonably Available Control Technology (RACT)
211.5390 Reclamation System
211.5410 Refiner
211.5430 Refinery Fuel Gas
211.5450 Refinery Fuel Gas System
211.5470 Refinery Unit or Refinery Process Unit
211.5480 Reflective Argent Coating
211.5490 Refrigerated Condenser
211.5500 Regulated Air Pollutant
211.5510 Reid Vapor Pressure
211.5530 Repair
211.5550 Repair Coat
211.5570 Repaired
211.5590 Residual Fuel Oil
211.5600 Resist Coat
211.5610 Restricted Area
211.5630 Retail Outlet
211.5650 Ringelmann Chart
211.5670 Roadway
211.5690 Roll Coater
211.5710 Roll Coating
211.5730 Roll Printer

211.5750 Roll Printing
211.5770 Rotogravure Printing
211.5790 Rotogravure Printing Line
211.5810 Safety Relief Valve
211.5830 Sandblasting
211.5850 Sanding Sealers
211.5870 Screening
211.5890 Sealer
211.5910 Semi-Transparent Stains
211.5930 Sensor
211.5950 Set of Safety Relief Valves
211.5970 Sheet Basecoat
211.5990 Shotblasting
211.6010 Side-Seam Spray Coat
211.6030 Smoke
211.6050 Smokeless Flare
211.6060 Soft Coat
211.6070 Solvent
211.6090 Solvent Cleaning
211.6110 Solvent Recovery System
211.6130 Source
211.6140 Specialty Coatings
211.6150 Specialty High Gloss Catalyzed Coating
211.6170 Specialty Leather
211.6190 Specialty Soybean Crushing Source
211.6210 Splash Loading
211.6230 Stack
211.6250 Stain Coating
211.6270 Standard Conditions
211.6290 Standard Cubic Foot (scf)
211.6310 Start-Up
211.6330 Stationary Emission Source
211.6350 Stationary Emission Unit
211.6370 Stationary Source
211.6390 Stationary Storage Tank
211.6400 Stencil Coat
211.6410 Storage Tank or Storage Vessel
211.6430 Styrene Devolatilizer Unit
211.6450 Styrene Recovery Unit
211.6470 Submerged Loading Pipe
211.6490 Substrate
211.6510 Sulfuric Acid Mist
211.6530 Surface Condenser
211.6550 Synthetic Organic Chemical or Polymer Manufacturing Plant
211.6570 Tablet Coating Operation
211.6580 Texture Coat
211.6590 Thirty-Day Rolling Average
211.6610 Three-Piece Can
211.6630 Through-the-Valve Fill
211.6650 Tooling Resin
211.6670 Topcoat
211.6690 Topcoat Operation
211.6710 Touch-Up

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 (1992)].

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 _____ at _____ Ill. Reg._____, effective _____ _____.

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 Sections 218.431 through 218.436, and Sections 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 equilibruim 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 211.5060 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 more products that have the same maximum annual design capacity on a mass basis and if one of those chemicals is listed in Appendix A of 35 Ill. Adm. Code Part 218 or Part 219, 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 Part 218 or Part 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 flexible operation unit and is used predominantly to produce one or more of the listed chemicals in Appendix A of 35 Ill. Adm. Code Part 218 or Part 219, 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 metalizing 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

SUBPART A: GENERAL PROVISIONS

Section
218.100 Introduction
218.101 Savings Clause
218.102 Abbreviations and Conversion Factors
218.103 Applicability
218.104 Definitions
218.105 Test Methods and Procedures
218.106 Compliance Dates

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 CC: POLYESTER RESIN PRODUCT MANUFACTURING PROCESS

SUBPART DD: AEROSOL CAN FILLING

SUBPART FF: BAKERY OVENS

SUBPART PP: MISCELLANEOUS FABRICATED PRODUCT MANUFACTURING PROCESSES

Section
218.920 Applicability
218.923 Permit Conditions (Repealed)
218.926 Control Requirements
218.927 Compliance Schedule
218.928 Testing

SUBPART QQ: MISCELLANEOUS FORMULATION MANUFACTURING PROCESSES

Section
218.940 Applicability
218.943 Permit Conditions (Repealed)
218.946 Control Requirements
218.947 Compliance Schedule
218.948 Testing

SUBPART RR: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING PROCESSES

Section
218.960 Applicability
218.963 Permit Conditions (Repealed)
218.966 Control Requirements
218.967 Compliance Schedule
218.968 Testing

SUBPART TT: OTHER EMISSION UNITS

Section
218.980 Applicability
218.983 Permit Conditions (Repealed)
218.986 Control Requirements
218.987 Compliance Schedule
218.988 Testing

SUBPART UU: RECORDKEEPING AND REPORTING

Section
218.990 Exempt Emission Units
218.991 Subject Emission Units

Section 218.Appendix A: List of Chemicals Defining Synthetic Organic Chemical and Polymer Manufacturing
Section 218.Appendix B: VOM Measurement Techniques for Capture Efficiency
Section 218.Appendix C: Reference Methods and Procedures
Section 218.Appendix D: Coefficients for the Total Resource Effectiveness Index (TRE) Equation
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. at 1945, effective January 24, 1994; amended in _____ at _____ Ill. Reg. at _____, effective _____.

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.

e) 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)*

		kg/l	lb/gal
b)	Can Coating		
1)	Sheet basecoat and overvarnish	0.34	(2.8)
		0.26*	(2.2)*
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 0.20*	(1.7) (1.7)*
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 0.42*	(3.5) (3.5)*
	B) Baked	0.42 0.36*	(3.5) (3.0)*
	~~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 0.34*	(3.5) (2.8)*
	B) Baked	0.36 0.28*	(3.0) (2.3)*
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	(5.0)
		0.60*	(5.0)*
4)	Repair coat	0.67	(5.6)
		0.67*	(5.6)*
5)	Sealer	0.67	(5.6)
		0.67*	(5.6)*
6)	Semi-transparent stain	0.79	(6.6)
		0.79*	(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.

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

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_1 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, O, 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 subsections (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.

(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 (c) 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 particiapting

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) 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 (c)(2) of this Section. Actual daily emissions from 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:

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

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:

$A_d = A_i + A_p$

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 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 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:

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

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 l (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(c)(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 requirements 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 atmoshpere or to a recovery system.

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; or

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.

6) Any reactor or distillation unit included within an Early Reduction Program, as specified in 40 CFR 63, and published in 59 Fed. Reg. 61970 (October 22, 1993), evidenced by a timely enforceable commitment approved by USEPA.

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

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:

$$C_c = C_{VOM} \times \frac{17.9}{20.9 - \%O_{2d}}$$

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 x 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 degress 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 absorber 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 absorber 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. Admin. 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 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) 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 30 days of 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.

(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. Admin. 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).

(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) 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	0.018
	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	0.004

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 (0) 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 Base Line 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)

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) 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-	0.54	(4.5)

		flexible		
	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

Section

SUBPART C: ORGANIC EMISSIONS FROM MISCELLANEOUS EQUIPMENT

Section

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

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 _____ at _____ Ill. Reg. _____ effective _____.

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)*

		kg/l	lb/gal
b)	Can Coating		
1)	Sheet basecoat and overvarnish	0.34	(2.8)
		0.26*	(2.2)*
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, Sections 219.401 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	(3.5)
		0.36*	(3.0)*
~~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)
		0.34*	(2.8)*
	B) Baked	0.36	(3.0)
		0.28*	(2.3)*

k)	Heavy Off-Highway Vehicle Products Coating	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) 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)
		0.67*	(5.6)*
2)	Opaque stain	0.56	(4.7)
		0.56*	(4.7)*
3)	Pigmented coat	0.60	(5.0)
		0.60*	(5.0)*
4)	Repair coat	0.67	(5.6)
		0.67*	(5.6)*
5)	Sealer	0.67	(5.6)
		0.67*	(5.6)*
6)	Semi-transparent stain	0.79	(6.6)

		0.79*	(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) 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:

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

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_1 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) ~~Part~~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(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.

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 subsections (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.

(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 (c) 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 particiapting 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) 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 (c)(2) of this Section. Actual daily emissions from 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:

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

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_i, 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 1 (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 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 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(c)(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 requirements 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 atmoshpere 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; or

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.

6) Any reactor or distillation unit included within an Early Reduction Program, as specified in 40 CFR 63, and published in 59 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 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 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:

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

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 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 degress 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 absorber 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 absorber 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. Admin. 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) 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 30 days of 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.

(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. Admin. 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).

(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 _____)

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 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	0.004

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 (0) 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 Base Line 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)

		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 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 15th day of September, 1994, by a vote of 6-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board