

ILLINOIS POLLUTION CONTROL BOARD
November 18, 1994

IN THE MATTER OF:)
)
15% ROP PLAN CONTROL MEASURES)
FOR VOM EMISSIONS - PART VII:) R94-33
BATCH OPERATIONS:) (Rulemaking)
AMENDMENTS TO 35 ILL. ADM.)
CODE PARTS 211, 218 AND 219)

Proposed Rule. First Notice.

OPINION AND ORDER OF THE BOARD (by R.C. Flemal):

On November 14, 1994, the Illinois Environmental Protection Agency (Agency) filed this proposal for rulemaking. The proposal represents one part of Illinois' submittal of a complete state implementation plan (SIP). Section 182(b)(1) of the Clean Air Act (42 U.S.C. 7511(b)(1)) requires all moderate and above ozone nonattainment areas to achieve a 15% reduction of 1990 emissions of volatile organic material (VOM) by 1996. The Chicago and Metro-East St. Louis areas are classified as "Severe" and "Moderate" nonattainment for ozone, respectively, and are subject to the 15% reduction requirement. This proposal represents Part VII of the rulemakings anticipated in the 15% Rate of Progress Plan ("15% ROP Plan"). The proposal seeks to amend 35 Ill. Adm. Code 211, 218 and 219.

The proposed rulemaking would control VOM emissions from chemical processes operating in a batch mode. The proposed amendments to Subpart V are intended to cover all batch operations at sources identified by standard industrial classification codes, as defined in the 1987 edition of the Standard Industrial Classification Manual, which manufacture as a primary product or intermediate, any chemical identified by the following: plastic materials and resins (SIC 2821), pharmaceutical preparations (2834), medicinal chemicals and botanical production (SIC 2833), gum and wood chemicals (SIC 2861), cyclic crudes and intermediates (SIC 2865), industrial organic chemicals (SIC 2869) and agricultural chemicals (SIC 2879). The rulemaking is proposed for process vents associated with batch or non-continuous chemical manufacturing operations.

Batch operations in the Chicago and Metro-East ozone nonattainment areas, as defined in 35 Ill. Adm. Code Parts 218 and 219, Sections 218.103 and 219.103, are subject to this rulemaking. All process vents associated with batch operations at Stepan Company's Millsdale manufacturing facility, Elwood, Illinois, are also subject to the proposal.

Today the Board acts to send this proposal to first notice under the Illinois Administrative Procedure Act, but without commenting on the merits of the proposal.

This proposal was filed pursuant to Section 28.5 of the Environmental Protection Act (Act) as a fast-track rulemaking proceeding. (415 ILCS 5/28.5 (1992).) Section 28.5 requires the Board to proceed with rulemaking under set time-frames. The Board has no discretion to adjust these time frames under any circumstances. The following schedule indicates the deadlines by which the Board must act, as provided in Section 28.5:

first notice	on or before November 29, 1994
first hearing	on or before January 8, 1995
second hearing	no later than 30 days after the start of the first hearing
third hearing	no later than 14 days after the start of the second hearing
second notice	
(if third hearing cancelled)	on or before March 24, 1995
(if third hearing held)	on or before April 13, 1995
final adoption and filing	21 days after receipt of JCAR certificate of no objection

The Board notes that the above dates are the deadlines as established by Section 28.5 and do not represent actual hearing dates or filing dates. While the schedule includes second and third hearings, these hearings may be cancelled if unnecessary. The Board will proceed in this matter as prescribed in Section 28.5 and discussed in the Board's resolution. (See Clean Air Act Rulemaking Procedures Pursuant to Section 28.5 of the Environmental Protection Act, as Added By P.A. 87-1213, (October 29, 1992 and December 3, 1992), RES 92-2.)

The Agency has filed a motion for waiver of requirements with the proposal. The Agency requests waiver of the following requirements: that the Agency submit the original and nine copies of the entire regulatory proposal; that the Agency submit an entire copy of the proposal to the Attorney General and the Department of Energy and Natural Resources (DENR); and that the Agency submit copies of all documents upon which it relied. The Agency asks that it be permitted to file an original plus five complete copies of the proposal and four partial copies. A partial copy includes the pleadings and the proposed rules, but does not include the supporting exhibits. The Attorney General and DENR have agreed with the Agency that a copy of the proposal need not be served upon them. The Agency has provided the Board with one copy of some of the documents on which it relied, and notes that the other documents are readily accessible or already in the Board's possession. The Board grants the Agency's motion.

ORDER

The Board directs the Clerk to cause publication of the following amendments in the Illinois Register for first notice:

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 Incorporation by Reference
 211.102 Abbreviations and Conversion Factors

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
 211.560 As-Applied Fountain Solution
 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
211.670 Baked Coatings
211.690 Batch Loading
211.695 Batch Operation
211.696 Batch Process Train
211.710 Bead-Dipping
211.730 Binders
211.750 British Thermal Unit
211.770 Brush or Wipe Coating
211.790 Bulk Gasoline Plant
211.810 Bulk Gasoline Terminal
211.830 Can
211.850 Can Coating
211.870 Can Coating Line
211.890 Capture
211.910 Capture Device
211.930 Capture Efficiency
211.950 Capture System
211.970 Certified Investigation
211.990 Choke Loading
211.1010 Clean Air Act
211.1050 Cleaning and Separating Operation
211.1070 Cleaning Materials
211.1090 Clear Coating
211.1110 Clear Topcoat
211.1130 Closed Purge System
211.1150 Closed Vent System
211.1170 Coal Refuse
211.1190 Coating
211.1210 Coating Applicator
211.1230 Coating Line
211.1250 Coating Plant
211.1270 Coil Coating
211.1290 Coil Coating Line
211.1310 Cold Cleaning
211.1330 Complete Combustion
211.1350 Component
211.1370 Concrete Curing Compounds
211.1390 Concentrated Nitric Acid Manufacturing Process
211.1410 Condensate
211.1430 Condensible PM-10
211.1470 Continuous Process
211.1490 Control Device
211.1510 Control Device Efficiency
211.1530 Conventional Soybean Crushing Source
211.1550 Conveyorized Degreasing
211.1570 Crude Oil
211.1590 Crude Oil Gathering
211.1610 Crushing
211.1630 Custody Transfer
211.1650 Cutback Asphalt
211.1670 Daily-Weighted Average VOM Content

211.1690 Day
211.1710 Degreaser
211.1730 Delivery Vessel
211.1750 Dip Coating
211.1770 Distillate Fuel Oil
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
211.1890 Electrostatic Bell or Disc Spray
211.1910 Electrostatic Spray
211.1920 Emergency or Standby Unit
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
211.2310 Final Repair Coat
211.2330 Firebox
211.2350 Fixed-Roof Tank
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
211.2650 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
211.3480 Loading Event
211.3490 Low Solvent Coating
211.3500 Lubricating Oil
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)
211.3620 Manually Operated Equipment
211.3630 Manufacturing Process
211.3650 Marine Terminal
211.3660 Marine Vessel

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
211.4070 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
211.4260 Organic Solvent
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
211.4750 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 Pressure/Vacuum Relief Valve
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
211.5245 Process Vent
211.5250 Process Weight Rate
211.5270 Production Equipment Exhaust System
211.5310 Publication Rotogravure Printing Line
211.5330 Purged Process Fluid
211.5340 Rated Heat Input Capacity
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
211.5490 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

211.5610 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
211.6025 Single Unit Operation
211.6030 Smoke
211.6050 Smokeless Flare
211.6070 Solvent
211.6090 Solvent Cleaning
211.6110 Solvent Recovery System
211.6130 Source
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
211.6355 Stationary Gas Turbine
211.6360 Stationary Reciprocating Internal Combustion Engine
211.6370 Stationary Source
211.6390 Stationary Storage Tank
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
 211.6590 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
 211.6730 Transfer Efficiency
 211.6750 Tread End Cementing
 211.6770 True Vapor Pressure
 211.6790 Turnaround
 211.6810 Two-Piece Can
 211.6830 Under-the-Cup Fill
 211.6850 Undertread Cementing
 211.6870 Unregulated Safety Relief Valve
 211.6890 Vacuum Producing System
 211.6910 Vacuum Service
 211.6930 Valves Not Externally Regulated
 211.6950 Vapor Balance System
 211.6970 Vapor Collection System
 211.6990 Vapor Control System
 211.7010 Vapor-Mounted Primary Seal
 211.7030 Vapor Recovery System
 211.7050 Vapor-Suppressed Polyester Resin
 211.7070 Vinyl Coating
 211.7090 Vinyl Coating Line
 211.7110 Volatile Organic Liquid (VOL)
 211.7130 Volatile Organic Material Content (VOMC)
 211.7150 Volatile Organic Material (VOM) or Volatile Organic
 Compound (VOC)
 211.7170 Volatile Petroleum Liquid
 211.7190 Wash Coat
 211.7210 Wastewater (Oil/Water) Separator
 211.7230 Weak Nitric Acid Manufacturing Process
 211.7250 Web
 211.7270 Wholesale Purchase - Consumer
 211.7290 Wood Furniture
 211.7310 Wood Furniture Coating
 211.7330 Wood Furniture Coating Line
 211.7350 Woodworking

APPENDIX A Rule into Section Table

APPENDIX B Section into Rule Table

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. 111 $\frac{1}{2}$, 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 R94-12 at 18 Ill. Reg. 14962, effective September 21, 1994; amended in R94-14 at 18 Ill. Reg. 15744, effective October 17, 1994; amended in R94-15 at 18 Ill. Reg. 16379, effective November 4, 1994; amended in R94-16 at 18 Ill. Reg. _____, effective _____; amended in R94-33 at 18 Ill. Reg. _____, effective _____.

SUBPART B: DEFINITIONS

Section 211.695 Batch Operation

"Batch operation" means, for purposes of 35 Ill. Adm. Code Parts 218 and 219, Sections 218.500 through 218.506 and 219.500 through 219.506, a noncontinuous operation in which a discrete quantity or batch of feed is charged into a chemical manufacturing process unit and distilled or reacted, or otherwise used at one time, and may include, but is not limited to, reactors, filters, dryers, distillation columns, extractors, crystallizers, blend tanks, neutralizer tanks, digesters, surge tanks and product separators. After each batch operation, the equipment is generally emptied before a fresh batch is started.

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

Section 211.696 Batch Process Train

"Batch process train" means, for purposes of 35 Ill. Adm. Code Parts 218 and 219, Sections 218.500 through 218.506 and 219.500 through 219.506, the collection of equipment (e.g., reactors, filters, dryers, distillation columns, extractors, crystallizers, blend tanks, neutralizer tanks, digesters, surge tanks and product separators) configured to produce a specific product or intermediate by a batch operation. A batch process train terminates at the point of storage or product handling of the product or intermediate being produced in the batch process train. Irrespective of the product being produced, a batch process train which is independent of other processes shall be considered a single batch process train for purposes of 35 Ill. Adm. Code Parts 218 and 219.

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

Section 211.5245 Process Vent

"Process vent" means, for purposes of 35 Ill. Adm. Code Parts 218 and 219, Sections 218.500 through 218.506 and 219.500 through 219.506, any non-fugitive source of VOM emissions to the atmosphere resulting from non-combustion emission units. A process vent begins at the inlet to the control device, or in the absence of a control device, at the point of discharge to the atmosphere. This includes all emission units vents and stacks. Not included in this definition are exhaust streams from exhaust hoods and building ventilation fans which are used to provide ventilation for workers and not to collect and discharge emissions from specific emission units.

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

Section 211.6025 Single Unit Operation

"Single unit operation" means, for purposes of 35 Ill. Adm. Code Parts 218 and 219, Sections 218.500 through 218.506 and 219.500 through 219.506, a distinct piece of equipment in a batch operation within which one or more discrete processing steps occur. Such discrete processing steps include, but are not limited to, the preparation of reactants, facilitation of reactions, separation and purification of products or intermediates, and recycling of materials.

(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
218.107	Operation of Afterburners
218.108	Exemptions, Variations, and Alternative Means of Control or Compliance Determinations
218.109	Vapor Pressure of Volatile Organic Liquids
218.110	Vapor Pressure of Organic Material or Solvents
218.111	Vapor Pressure of Volatile Organic Material
218.112	Incorporations by Reference
218.113	Monitoring for Negligibly-Reactive Compounds
218.114	Compliance with Permit Conditions

SUBPART B: ORGANIC EMISSIONS FROM STORAGE AND LOADING OPERATIONS

Section	
218.119	Applicability for VOL
218.121	Storage Containers
218.122	Loading Operations
218.123	Petroleum Liquid Storage Tanks
218.124	External Floating Roofs
218.125	Compliance Dates (Repealed)
218.126	Compliance Plan (Repealed)

SUBPART C: ORGANIC EMISSIONS FROM MISCELLANEOUS EQUIPMENT

Section	
218.141	Separation Operations
218.142	Pumps and Compressors
218.143	Vapor Blowdown
218.144	Safety Relief Valves

SUBPART E: SOLVENT CLEANING

Section	
218.181	Solvent Cleaning in General
218.182	Cold Cleaning
218.183	Open Top Vapor Degreasing
218.184	Conveyorized Degreasing
218.185	Compliance Schedule (Repealed)
218.186	Test Methods

SUBPART F: COATING OPERATIONS

Section	
218.204	Emission Limitations
218.205	Daily-Weighted Average Limitations
218.206	Solids Basis Calculation
218.207	Alternative Emission Limitations
218.208	Exemptions from Emission Limitations
218.209	Exemption from General Rule on Use of Organic Material
218.210	Compliance Schedule
218.211	Recordkeeping and Reporting

SUBPART G: USE OF ORGANIC MATERIAL

Section	
218.301	Use of Organic Material
218.302	Alternative Standard
218.303	Fuel Combustion Emission Units
218.304	Operations with Compliance Program

SUBPART H: PRINTING AND PUBLISHING

Section	
218.401	Flexographic and Rotogravure Printing
218.402	Applicability
218.403	Compliance Schedule
218.404	Recordkeeping and Reporting
218.405	Heatset-Web-Offset Lithographic Printing

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

Section	
218.421	General Requirements
218.422	Inspection Program Plan for Leaks
218.423	Inspection Program for Leaks
218.424	Repairing Leaks
218.425	Recordkeeping for Leaks
218.426	Report for Leaks
218.427	Alternative Program for Leaks
218.428	Open-Ended Valves

218.429 Standards for Control Devices
 218.430 Compliance Date (Repealed)

SUBPART R: PETROLEUM REFINING AND
 RELATED INDUSTRIES; ASPHALT MATERIALS

Section
 218.441 Petroleum Refinery Waste Gas Disposal
 218.442 Vacuum Producing Systems
 218.443 Wastewater (Oil/Water) Separator
 218.444 Process Unit Turnarounds
 218.445 Leaks: General Requirements
 218.446 Monitoring Program Plan for Leaks
 218.447 Monitoring Program for Leaks
 218.448 Recordkeeping for Leaks
 218.449 Reporting for Leaks
 218.450 Alternative Program for Leaks
 218.451 Sealing Device Requirements
 218.452 Compliance Schedule for Leaks
 218.453 Compliance Dates (Repealed)

SUBPART S: RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS

Section
 218.461 Manufacture of Pneumatic Rubber Tires
 218.462 Green Tire Spraying Operations
 218.463 Alternative Emission Reduction Systems
 218.464 Emission Testing
 218.465 Compliance Dates (Repealed)
 218.466 Compliance Plan (Repealed)

SUBPART T: PHARMACEUTICAL MANUFACTURING

Section
 218.480 Applicability
 218.481 Control of Reactors, Distillation Units, Crystallizers,
 Centrifuges and Vacuum Dryers
 218.482 Control of Air Dryers, Production Equipment Exhaust
 Systems and Filters
 218.483 Material Storage and Transfer
 218.484 In-Process Tanks
 218.485 Leaks
 218.486 Other Emission Units
 218.487 Testing
 218.488 Monitoring for Air Pollution Control Equipment
 218.489 Recordkeeping for Air Pollution Control Equipment

SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES

Section
218.500 Applicability for Batch Operations
218.501 Control Requirements for Batch Operations

- 218.502 Determination of Uncontrolled Total Annual Mass Emissions and Average Flow Rate Values for Batch Operations
- 218.503 Performance and Testing Requirements for Batch Operations
- 218.504 Monitoring Requirements for Batch Operations
- 218.505 Reporting and Recordkeeping for Batch Operations
- 218.506 Compliance Date
- 218.521 Definitions (Repealed)
- 218.525 Emission Limitations for Air Oxidation Processes
- 218.526 Testing and Monitoring
- 218.527 Compliance Date (Repealed)

SUBPART W: AGRICULTURE

- Section
- 218.541 Pesticide Exception

SUBPART X: CONSTRUCTION

- Section
- 218.561 Architectural Coatings
- 218.562 Paving Operations
- 218.563 Cutback Asphalt

SUBPART Y: GASOLINE DISTRIBUTION

- Section
- 218.581 Bulk Gasoline Plants
- 218.582 Bulk Gasoline Terminals
- 218.583 Gasoline Dispensing Operations - Storage Tank Filling Operations
- 218.584 Gasoline Delivery Vessels
- 218.585 Gasoline Volatility Standards
- 218.586 Gasoline Dispensing Operations - Motor Vehicle Fueling Operations

SUBPART Z: DRY CLEANERS

- Section
- 218.601 Perchloroethylene Dry Cleaners
- 218.602 Applicability
- 218.603 Leaks
- 218.604 Compliance Dates (Repealed)
- 218.605 Compliance Plan (Repealed)
- 218.606 Exception to Compliance Plan (Repealed)
- 218.607 Standards for Petroleum Solvent Dry Cleaners
- 218.608 Operating Practices for Petroleum Solvent Dry Cleaners
- 218.609 Program for Inspection and Repair of Leaks
- 218.610 Testing and Monitoring
- 218.611 Applicability for Petroleum Solvent Dry Cleaners
- 218.612 Compliance Dates (Repealed)

218.613 Compliance Plan (Repealed)

SUBPART AA: PAINT AND INK MANUFACTURING

Section

218.620 Applicability
 218.621 Exemption for Waterbase Material and Heatset-Offset Ink
 218.623 Permit Conditions (Repealed)
 218.624 Open Top Mills, Tanks, Vats or Vessels
 218.625 Grinding Mills
 218.626 Storage Tanks
 218.628 Leaks
 218.630 Clean Up
 218.636 Compliance Schedule
 218.637 Recordkeeping and Reporting

SUBPART BB: POLYSTYRENE PLANTS

Section

218.640 Applicability
 218.642 Emissions Limitation at Polystyrene Plants
 218.644 Emissions Testing

SUBPART CC: POLYESTER RESIN PRODUCT MANUFACTURING PROCESS

Section

218.660 Applicability
 218.666 Control Requirements
 218.667 Compliance Schedule
 218.668 Testing
 218.670 Recordkeeping and Reporting for Exempt Emission Units
 218.672 Recordkeeping and Reporting for Subject Emission Units

SUBPART DD: AEROSOL CAN FILLING

Section

218.680 Applicability
 218.686 Control Requirements
 218.688 Testing
 218.690 Recordkeeping and Reporting for Exempt Emission Units
 218.692 Recordkeeping and Reporting for Subject Emission Units

SUBPART GG: MARINE TERMINALS

Section

218.760 Applicability
 218.762 Control Requirements
 218.764 Compliance Certification
 218.766 Leaks
 218.768 Testing and Monitoring
 218.770 Recordkeeping and Reporting
 218.875 Applicability of Subpart BB (Renumbered)
 218.877 Emissions Limitation at Polystyrene Plants (Renumbered)

- 218.879 Compliance Date (Repealed)
- 218.881 Compliance Plan (Repealed)
- 218.883 Special Requirements for Compliance Plan (Repealed)
- 218.886 Emissions Testing (Renumbered)

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 Test Methods for Air Oxidation Processes
- Section 218.Appendix D: Coefficients for the Total Resource Effectiveness Index (TRE) Equation
- Section 218.Appendix E: List of Affected Marine Terminals

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 R94-12 at 18 Ill. Reg. 14973, effective September 21, 1994; amended in R94-15 at 18 Ill. Reg. 16379, effective November 4, 1994; amended in R94-16 at 18 Ill. Reg. _____, effective _____; amended in R94-33 at 18 Ill. Reg. _____, effective _____.

SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES

Section 218.500 Applicability for Batch Operations

- a) The control requirements set forth in Section 218.501 of this Subpart shall apply to:
 - 1) Process vents associated with batch operations at sources identified by any of the following four-digit standard industrial classification ("SIC") codes, as defined in the 1987 edition of the Federal Standard Industrial Classification Manual: SIC 2821, 2833, 2834, 2861, 2865, 2869, and 2879; and
 - 2) All batch operations at Stepan Company's Millsdale manufacturing facility, Elwood, Illinois.
- b) The requirements of Sections 218.500 through 218.506 shall not apply to:
 - 1) Any emission unit included within the category specified in 35 Ill. Adm. Code Part 218, Subparts B or T;
 - 2) Any emission unit included within the category specified in Sections 218.520 through 218.527 of

this Subpart; and

3) Any emission unit included within an Early Reduction Program, as specified in 40 CFR Part 63, and published in 57 Fed. Reg. 61970 (December 29, 1992), evidenced by a timely enforceable commitment approved by USEPA.

c) The following single unit operations and batch process trains are subject to this Subpart but are considered to be de minimis and are, therefore, exempt from the control requirements of Section 218.501 of this Subpart. However, the recordkeeping and reporting requirements in Section 218.505 of this Subpart shall apply to such de minimis single unit operations and batch process trains:

1) Within a batch operation, any single unit operation with uncontrolled total annual mass emissions of less than or equal to 500 lb/yr of VOM. Such single unit operations are also excluded from the calculation of the total annual mass emissions for a batch process train. If the uncontrolled total annual mass emissions from such exempt single unit operation exceed 500 lb/yr of VOM in any subsequent year, the source shall calculate applicability in accordance with subsection (d) of this Section for both the individual single unit operation and the batch process train containing the single unit operation; and

2) Any batch process train containing process vents that have, in the aggregate, uncontrolled total annual mass emissions, as determined in accordance with Section 218.502(a) of this Subpart, of less than 30,000 lb/yr of VOM for all products manufactured in such batch process train.

d) The applicability equations in subsection (e) of this Section, which require the calculation of uncontrolled total annual mass emissions and flow rate value, shall be used to determine whether a single unit operation or a batch process train is subject to the control requirements set forth in Section 218.501 of this Subpart. The applicability equation shall be applied to the following:

1) Any single unit operation with uncontrolled total annual mass emissions that exceed 500 lb/yr and with a VOM concentration greater than 500 ppmv. In this individual determination, no applicability

analysis shall be performed for any single unit operation with a VOM concentration of less than or equal to 500 ppmv; and

- 2) Any batch process train containing process vents which, in the aggregate, have uncontrolled total annual mass emissions of 30,000 lb/yr or more of VOM from all products manufactured in the batch process train. Any single unit operation with uncontrolled total annual mass emissions exceeding 500 lb/yr, regardless of VOM concentration, shall be included in the aggregate applicability analysis.

e) Applicability equations

- 1) The applicability equations in this subsection are specific to volatility.

- 2) For purposes of this subsection, the following abbreviations apply:

A) FR = Vent stream flow rate, scfm;

B) UTAME = Uncontrolled total annual mass emissions of VOM, expressed as lb/yr;

C) WAV = Weighted average volatility;

D) MVOM_i = Mass of VOM component i; and

E) MWVOM_i = Molecular weight of VOM component i; and

F) VP_i = Vapor pressure of VOM component i.

- 3) Weighted average volatility shall be calculated as follows:

$$WAV = \frac{\sum_{i=1}^n \left[(VP_i) \times \frac{(MVOM_i)}{(MWVOM_i)} \right]}{\sum_{i=1}^n \left[\frac{(MVOM_i)}{(MWVOM_i)} \right]}$$

- 4) For purposes of determining applicability, flow rate values shall be calculated as follows:

- A) Low WAV has a vapor pressure less than or equal to 75 mmHg at 20°C (68°F), and shall use the following equation:

$$FR = [0.07 (UTAME)] - 1,821$$

- B) Moderate WAV has a vapor pressure greater than 75 mmHg but less than or equal to 150 mmHg at 20°C (68°F), and shall use the following equation:

$$FR = [0.031 (UTAME)] - 494$$

- C) High WAV has a vapor pressure greater than 150 mmHg at 20°C (68°F), and shall use the following equation:

$$FR = [0.013 (UTAME)] - 301$$

- 5) To determine the vapor pressure of VOM, the applicable methods and procedures in Section 218.111 of this Part shall apply.

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

Section 218.501 Control Requirements for Batch Operations

- a) Every owner or operator of a single unit operation with an average flow rate, as determined in accordance with Section 218.502(b) of this Subpart, below the flow rate value calculated by the applicability equations contained in Section 218.500(e) of this Subpart, shall reduce uncontrolled VOM emissions from such single unit operation by an overall efficiency, on average, of at least 90 percent, or 20 ppmv, per batch cycle.
- b) Every owner or operator of a batch process train with an average flow rate, as determined in accordance with Section 218.502(b)(2) of this Subpart, below the flow rate value calculated by the applicability equations contained in Section 218.500(e) of this Subpart, shall reduce uncontrolled VOM emissions from such batch process train by an overall efficiency, on average, of at least 90 percent, or 20 ppmv, per batch cycle. For purposes of demonstrating compliance with the emission limitations set forth in this Section, any control device meeting the criteria in subsection (c) of this Section shall be deemed to achieve a control efficiency of 90 percent, or 20 ppmv, per batch cycle, as applicable.

c) Notwithstanding subsections (a) or (b) of this Section, any source that has installed on or before March 15, 1995, any control device which is demonstrated to the Agency's satisfaction to be unable to meet the applicable control requirements of this Section, scrubber, or shell and tube condenser using a non-refrigerated cooling media, and such device achieves at least 81 percent control efficiency of VOM emissions, is required to meet the 90 percent emission limitation or 20 ppmv VOM concentration set forth in subsections (a) or (b) of this Section, as applicable, upon the earlier to occur of the date the device is replaced for any reason, including, but not limited to, normal maintenance, malfunction, accident, and obsolescence, or December 31, 1999. A scrubber, shell and tube condenser using a non-refrigerated cooling media, or other control device meeting the criteria of this subsection is considered replaced when:

- 1) All of the device is replaced; or
- 2) When either 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 control device that complies with the 90 percent emission limitation or 20 ppmv VOM concentration level in subsection (a) of this Section, as applicable.

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

e) If a flare is used to comply with this Section, 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.

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

Section 218.502

Determination of Uncontrolled Total Annual Mass Emissions and Average Flow Rate Values for Batch Operations

a) Uncontrolled total annual mass emissions shall be determined by the following methods:

- 1) Direct process vent emissions measurements taken prior to any release to the atmosphere, following any recovery device and prior to any control device, provided such measurements conform with the requirements of measuring the mass flow rate of VOM incoming to the single unit operation as set forth in Section 218.503(f)(2), (f)(3)(A) and (f)(3)(B) of this Subpart; or
 - 2) Engineering estimates of the uncontrolled VOM emissions from a process vent or process vents, in the aggregate, within a batch process train, multiplied by the potential or permitted number of batch cycles per year as follows:
 - A) Engineering estimates of the uncontrolled VOM emissions shall be based upon accepted chemical engineering principles, measurable process parameters, or physical or chemical laws and their properties. Examples of 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; and
 - iii) Estimation of VOM concentrations based on saturation conditions.
 - B) All data, assumptions and procedures used in any engineering estimate shall be documented.
- b) Average flow rate shall be determined by any of the following methods:
- 1) Direct process vent flow rate measurements taken prior to any release to the atmosphere, following any recovery device and prior to any control device, provided such measurements conform with the requirements of measuring incoming volumetric flow rate set forth in Section 218.503(e)(2) of this Subpart;
 - 2) Average flow rate for a single unit operation having multiple emission events or batch process trains shall be the weighted average flow rate, calculated as follows:

$$\text{WAF} = \frac{\sum_{i=1}^n [\text{AFR}_i \times \text{ADE}_i]}{\sum_{i=1}^n (\text{ADE}_i)}$$

where:

- WAF = Actual weighted average flow rate for a single unit operation or batch process train;
- AFR_i = Average flow rate per emission event;
- ADE_i = Annual duration of emission event; and
- n = Number of emission events.

3) Engineering estimates calculated in accordance with the requirements in subsection (a)(2) of this Section.

c) For purposes of determining the average flow rate for steam vacuuming systems, the steam flow shall be included in the average flow rate calculation.

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

Section 218.503 Performance and Testing Requirements for Batch Operations

- a) Upon the Agency's request, the owner or operator of a batch operation shall conduct testing to demonstrate compliance with Section 218.501 of this Subpart. The owner or operator shall, at its own expense, conduct such tests in accordance with the applicable test methods and procedures specified in Section 218.503(d), (e), and (f) of this Subpart.
- b) Notwithstanding subsection (a) of this Section, flares and process boilers used to comply with control requirements of Section 218.501 of this Subpart shall be exempt from performance testing requirements.
- c) When a flare is used to comply with the control requirements of Section 218.501 of this Subpart, the flare shall comply with the requirements of 40 CFR 60.18, incorporated by reference at Section 218.112 of this Part.

- d) The owner or operator of a batch operation that is exempt from the control requirements of Section 218.501 of this Subpart shall demonstrate, upon the Agency's request, the absence of oversized gas moving equipment in any manifold. Gas moving equipment shall be considered oversized if it exceeds the maximum requirements of the exhaust flow rate by more than 30 percent.
- e) For the purpose of demonstrating compliance with the control requirements in Section 218.501 of this Subpart, the batch operation shall be run at representative operating conditions and flow rates during any performance test.
- f) The following methods in 40 CFR 60, Appendix A, incorporated by reference at Section 218.112 of this Part, shall be used to demonstrate compliance with the reduction efficiency requirement set forth in Section 218.501 of this Subpart:
- 1) Method 1 or 1A, as appropriate, for selection of the sampling sites if the flow measuring device is not a rotameter. The control device inlet sampling site for determination of vent stream VOM composition reduction efficiency shall be prior to the control device and after the control device;
 - 2) Method 2, 2A, 2C, or 2D, as appropriate, for determination of gas stream volumetric flow rate flow measurements, which shall be taken continuously. No traverse is necessary when the flow measuring device is an ultrasonic probe.;
 - 3) Method 25A or Method 18, if applicable, to determine the concentration of VOM in the control device inlet and outlet:
 - A) The sampling time for each run will be the entire length of the batch cycle in which readings shall be taken continuously, if Method 25A is used, or as often as is possible using Method 18, with a maximum of 15-minute intervals between measurements throughout the batch cycle;
 - B) The mass emission rate from the process vent or inlet to the control device shall be determined by combining concentration and flow rate measurements taken simultaneously at sampling sites selected in accordance with subsection (f)(1) of this Section throughout

the batch cycle;

- C) The mass emission rate from the control device outlet shall be obtained by combining concentration and flow rate measurements taken simultaneously at sampling sites selected in accordance with subsection (f)(1) of this Section throughout the batch cycle; and
- D) The efficiency of the control device shall be determined by integrating the mass emission rates obtained in subsections (c)(3)(A) and (c)(3)(B) of this Section, over the time of the batch cycle and dividing the difference in inlet and outlet mass flow totals by the inlet mass flow total.
- g) Upon request by the Agency to conduct testing, an owner or operator of a batch operation which has installed a scrubber, a shell and tube condenser using a non-refrigerated cooling media, or any other control device which meets the criteria of Section 218.501(c) of this Subpart, shall demonstrate that such device achieves the control efficiency applicable within Section 218.501 of this Subpart upon the earlier to occur of the date the device is replace or December 31, 1999.
- h) The owner or operator of a batch operation may propose an alternative test method or procedures to demonstrate compliance with the control requirements set forth in Section 218.501 of this Subpart. Such method or procedures shall be approved by the Agency and USEPA as evidenced by federally enforceable permit conditions.

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

Section 218.504 Monitoring Requirements for Batch Operations

- a) Every owner or operator using an afterburner to comply with Section 218.501 of this Subpart, shall install, calibrate, maintain and operate, according to manufacturer's specifications, temperature monitoring devices with an accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius, equipped with continuous recorders.
- i) Where a catalytic afterburner is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

- 2) Where an afterburner other than a catalytic afterburner is used, a temperature monitoring device shall be installed in the combustion chamber.
- b) Every owner or operator using a flare to comply with Section 218.501 of this Subpart, shall install, calibrate, maintain and operate, according to manufacturer's specifications, a heat sensing device, such as an ultra-violet beam sensor or thermocouple, at the pilot light to indicate continuous presence of a flame.
 - c) Every owner or operator using a scrubber to comply with this Section 218.501 of this Subpart, shall install, calibrate, maintain, and operate, according to manufacturer's specifications, the following:
 - 1) A temperature monitoring device for scrubbant liquid having an accuracy of ± 1 percent of the temperature being monitored expressed in degrees Celsius and a specific gravity device for scrubbant liquid, each equipped with a continuous recorder; or
 - 2) A VOM monitoring device used to indicate the concentration of VOM exiting the control device based on a detection principle such as infra-red photoionization, or thermal conductivity, each equipped with a continuous recorder.
 - d) Every owner or operator using a condenser to comply with Section 218.501 of this Subpart, shall install, calibrate, maintain, and operate, according to manufacturer's specifications, the following:
 - 1) A condenser exit 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
 - 2) A VOM monitoring device used to indicate the concentration of VOM such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.
 - e) Every owner or operator using a carbon adsorber to comply with this Subpart shall install, calibrate, maintain, and operate, according to the manufacturer's specifications the following equipment:
 - 1) An integrating regeneration stream flow monitoring

device having an accuracy of ± 10 percent, and a carbon bed temperature monitoring device having an accuracy of ± 1 percent of the temperature being monitored expressed in degrees Celsius, both equipped with a continuous recorder; or

- 2) A VOM monitoring device used to indicate the concentration level or VOM exiting such device based on a detection principle such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.
- f) Every owner or operator using a boiler or process heater with a design heat input capacity less than 44 Mw to comply with Section 218.501 of this Subpart, shall install, calibrate, maintain, and operate, according to the manufacturer's specifications, a temperature monitoring device in the firebox with an accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius, equipped with a continuous recorder. Any boiler or process heater in which all process vent streams are introduced with primary fuel is exempt from this requirement.
- g) The owner or operator of a process vent shall be permitted to monitor by an alternative method or may monitor parameters other than those listed in subsections (a) through (f) of this Section, if approved by the Agency and USEPA. Such alternative method or parameters shall be contained in the source's operating permit as federally enforceable permit conditions.
- h) Notwithstanding subsections (a) through (g) of this Section, sources using a scrubber, shell and tube condenser using a non-refrigerated cooling media, or other control device meeting the criteria of Section 218.501(c) of this Subpart, are required to monitor compliance with the requirements of this Subpart on and after the earlier to occur of the date such device is replaced for any reason or December 31, 1999.

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

Section 218.505 Reporting and Recordkeeping for Batch Operations

- a) Every owner or operator of a de minimis single unit operation or batch process train exempt under Section 218.500(c)(1) or (c)(2) of this Subpart, shall keep records of the uncontrolled total annual mass emissions

for any de minimis single unit operation or batch process train, as applicable, and documentation verifying these values or measurements. The documentation shall include the engineering calculations or measurements coupled with the potential or permitted number of batch cycles per year if the uncontrolled total annual mass emissions is obtained from measurements made in accordance with Section 218.503 of this Subpart.

b) Every owner or operator of a single unit operation exempt under Sections 218.500(b)(3) or (d) of this Subpart shall keep the following records:

- 1) The uncontrolled total annual mass emissions and documentation verifying these values or measurements. The documentation shall include the calculations or measurements coupled with the permitted or permitted number of emission events per year if the uncontrolled total annual mass emissions is obtained from measurements made in accordance with Section 218.503 of this Subpart; and
- 2) The average flow rate in scfm and documentation verifying this value.

c) Every owner or operator of a batch operation subject to the control requirements of Section 218.501 of this Subpart shall keep records of the following parameters required to be monitored under Section 218.504 of this Subpart:

- 1) If using a thermal or catalytic afterburner to comply with Section 218.501 of this Subpart, records indicating the average combustion chamber temperature of the afterburner (or the average temperature upstream and downstream of the catalyst bed for a catalytic afterburner), measured continuously and averaged over the same time period as the performance test;
- 2) If using a flare (i.e., stream-assisted, air-assisted or nonassisted) to comply with Section 218.501 of this Subpart, continuous records of the flare pilot flame monitoring and records of all periods of operations during which the pilot flame is absent. For purposes of determining compliance with 40 CFR 60.18, incorporated by reference at 218.112 of this Part, records shall also be kept indicating heat content determinations, flow rate measurements and the exit velocity determinations.

- 3) If using any of the following as a control device, the following records:
- A) Where a scrubber is used, the exit specific gravity (or alternative parameter which is a measure of the degree of absorbing liquid saturation, if approved by the Agency) and the average exit temperature of the absorbing liquid, measured continuously and averaged over the same time period as the performance test (both measured while the vent stream is routed normally);
 - B) Where a condenser is used, the average exit (product side) temperature measured continuously and averaged over the same time period as the performance test while the vent stream is routed normally;
 - C) Where a carbon adsorber is used, the total stream mass flow measured continuously and averaged over the same time period as the performance test (full carbon bed cycle), 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 routed normally); or
 - D) As an alternative to subsections (c)(3)(A), (c)(3)(B), or (c)(3)(C) of this Section, at a minimum, records indicating the concentration level or reading indicated by the VOM monitoring device at the outlet of the scrubber, condenser, or carbon adsorber, measured continuously and averaged over the same time period as the performance test (while the vent stream is routed normally).
- d) Every owner or operator of an single unit operation claiming a vent stream concentration exemption level, as set forth in Section 218.500(d)(1) of this Subpart, shall maintain records to indicate the vent stream concentration is less than or equal to 500 ppmv, and shall notify the Agency in writing if the vent stream concentration at any time equals or exceeds 500 ppmv, within 30 days of such event. Such notification shall include a copy of all records of such event.
- e) An owner or operator of a batch operation subject to the control requirements of Section 218.501 of this

Subpart may maintain alternative records other than those listed in subsection (c) of this Section. Any alternative recordkeeping shall be approved by the Agency and USEPA and shall be contained in the source's operating permit as federally enforceable permit conditions.

- f) Notwithstanding subsections (a) through (f) of this Section, any owner or operator of a batch operation which uses either a scrubber, shell and tube condenser using non-refrigerated cooling media, or other control device meeting the criteria of Section 218.501(c) of this Subpart, are required to monitor compliance with the requirements of this Subpart on and after the earlier to occur of the date such device is replaced for any reason or December 31, 1999.
- g) The owner or operator of a de minimis single unit operation or batch process train exempt from the control requirements of Section 218.501(c) of this Subpart shall notify the Agency in writing if the uncontrolled total annual mass emissions from such de minimis single unit operation or batch process train exceed the threshold in Section 218.501(c)(1) or (c)(2) of this Subpart, respectively, within 60 days after the event occurs. Such notification shall include a copy of all records of such event.
- h) Every owner or operator of a batch operation required to keep records under this Section shall maintain such records at the source for a minimum period of three years and shall make all such records available to the Agency upon request.

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

Section 218.506 Compliance Date

Every owner or operator of a batch operation subject to Sections 218.500 through 218.506 of this Subpart shall comply with its standards, limitations and mandates by March 15, 1996, or upon initial start up, whichever is later.

(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	
219.100	Introduction
219.101	Savings Clause
219.102	Abbreviations and Conversion Factors
219.103	Applicability
219.104	Definitions
219.105	Test Methods and Procedures
219.106	Compliance Dates
219.107	Operation of Afterburners
219.108	Exemptions, Variations, and Alternative Means of Control or Compliance Determinations
219.109	Vapor Pressure of Volatile Organic Liquids
219.110	Vapor Pressure of Organic Material or Solvents
219.111	Vapor Pressure of Volatile Organic Material
219.112	Incorporations by Reference
219.113	Monitoring for Negligibly-Reactive Compounds
219.114	Compliance with Permit Conditions

SUBPART B: ORGANIC EMISSIONS FROM STORAGE AND LOADING OPERATIONS

Section	
219.119	Applicability for VOL
219.121	Storage Containers
219.122	Loading Operations
219.123	Petroleum Liquid Storage Tanks
219.124	External Floating Roofs
219.125	Compliance Dates (Repealed)
219.126	Compliance Plan (Repealed)

SUBPART C: ORGANIC EMISSIONS FROM MISCELLANEOUS EQUIPMENT

Section	
219.141	Separation Operations
219.142	Pumps and Compressors
219.143	Vapor Blowdown
219.144	Safety Relief Valves

SUBPART E: SOLVENT CLEANING

Section

219.181 Solvent Cleaning in General
 219.182 Cold Cleaning
 219.183 Open Top Vapor Degreasing
 219.184 Conveyorized Degreasing
 219.185 Compliance Schedule (Repealed)
 219.186 Test Methods

SUBPART F: COATING OPERATIONS

Section
 219.204 Emission Limitations
 219.205 Daily-Weighted Average Limitations
 219.206 Solids Basis Calculation
 219.207 Alternative Emission Limitations
 219.208 Exemptions from Emission Limitations
 219.209 Exemption from General Rule on Use of Organic Material
 219.210 Compliance Schedule
 219.211 Recordkeeping and Reporting

SUBPART G: USE OF ORGANIC MATERIAL

Section
 219.301 Use of Organic Material
 219.302 Alternative Standard
 219.303 Fuel Combustion Emission Units
 219.304 Operations with Compliance Program

SUBPART H: PRINTING AND PUBLISHING

Section
 219.401 Flexographic and Rotogravure Printing
 219.402 Applicability
 219.403 Compliance Schedule
 219.404 Recordkeeping and Reporting
 219.405 Heatset-Web-Offset Lithographic Printing

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

Section
 219.421 General Requirements
 219.422 Inspection Program Plan for Leaks
 219.423 Inspection Program for Leaks
 219.424 Repairing Leaks
 219.425 Recordkeeping for Leaks
 219.426 Report for Leaks
 219.427 Alternative Program for Leaks
 219.428 Open-Ended Valves
 219.429 Standards for Control Devices
 219.430 Compliance Date (Repealed)

SUBPART R: PETROLEUM REFINING AND
RELATED INDUSTRIES; ASPHALT MATERIALS

Section	
219.441	Petroleum Refinery Waste Gas Disposal
219.442	Vacuum Producing Systems
219.443	Wastewater (Oil/Water) Separator
219.444	Process Unit Turnarounds
219.445	Leaks: General Requirements
219.446	Monitoring Program Plan for Leaks
219.447	Monitoring Program for Leaks
219.448	Recordkeeping for Leaks
219.449	Reporting for Leaks
219.450	Alternative Program for Leaks
219.451	Sealing Device Requirements
219.452	Compliance Schedule for Leaks
219.453	Compliance Dates (Repealed)

SUBPART S: RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS

Section	
219.461	Manufacture of Pneumatic Rubber Tires
219.462	Green Tire Spraying Operations
219.463	Alternative Emission Reduction Systems
219.464	Emission Testing
219.465	Compliance Dates (Repealed)
219.466	Compliance Plan (Repealed)

SUBPART T: PHARMACEUTICAL MANUFACTURING

Section	
219.480	Applicability
219.481	Control of Reactors, Distillation Units, Crystallizers, Centrifuges and Vacuum Dryers
219.482	Control of Air Dryers, Production Equipment Exhaust Systems and Filters
219.483	Material Storage and Transfer
219.484	In-Process Tanks
219.485	Leaks
219.486	Other Emission Units
219.487	Testing
219.488	Monitoring for Air Pollution Control Equipment
219.489	Recordkeeping for Air Pollution Control Equipment

SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES

Section	
<u>219.500</u>	<u>Applicability for Batch Operations</u>
<u>219.501</u>	<u>Control Requirements for Batch Operations</u>
<u>219.502</u>	<u>Determination of Uncontrolled Total Annual Mass Emissions and Actual Weighted Average Flow Rate Values for Batch Operations</u>

219.503 Performance and Testing Requirements for Batch Operations
 219.504 Monitoring Requirements for Batch Operations
 219.505 Reporting and Recordkeeping for Batch Operations
 219.506 Compliance Date
 219.521 Definitions (Repealed)
 219.525 Emission Limitations for Air Oxidation Processes
 219.526 Testing and Monitoring
 219.527 Compliance Date (Repealed)

SUBPART W: AGRICULTURE

Section
 219.541 Pesticide Exception

SUBPART X: CONSTRUCTION

Section
 219.561 Architectural Coatings
 219.562 Paving Operations
 219.563 Cutback Asphalt

SUBPART Y: GASOLINE DISTRIBUTION

Section
 219.581 Bulk Gasoline Plants
 219.582 Bulk Gasoline Terminals
 219.583 Gasoline Dispensing Operations - Storage Tank Filling Operations
 219.584 Gasoline Delivery Vessels
 219.585 Gasoline Volatility Standards
 219.586 Gasoline Dispensing Operations - Motor Vehicle Fueling Operations

SUBPART Z: DRY CLEANERS

Section
 219.601 Perchloroethylene Dry Cleaners
 219.602 Applicability
 219.603 Leaks
 219.604 Compliance Dates (Repealed)
 219.605 Compliance Plan (Repealed)
 219.606 Exception to Compliance Plan (Repealed)
 219.607 Standards for Petroleum Solvent Dry Cleaners
 219.608 Operating Practices for Petroleum Solvent Dry Cleaners
 219.609 Program for Inspection and Repair of Leaks
 219.610 Testing and Monitoring
 219.611 Applicability for Petroleum Solvent Dry Cleaners
 219.612 Compliance Dates (Repealed)
 219.613 Compliance Plan (Repealed)

SUBPART AA: PAINT AND INK MANUFACTURING

Section
 219.620 Applicability
 219.621 Exemption for Waterbase Material and Heatset-Offset Ink
 219.623 Permit Conditions (Repealed)
 219.624 Open Top Mills, Tanks, Vats or Vessels
 219.625 Grinding Mills
 219.626 Storage Tanks
 219.628 Leaks
 219.630 Clean Up
 219.636 Compliance Schedule
 219.637 Recordkeeping and Reporting

SUBPART BB: POLYSTYRENE PLANTS

Section
 219.640 Applicability
 219.642 Emissions Limitation at Polystyrene Plants
 219.644 Emissions Testing

SUBPART CC: POLYESTER RESIN PRODUCT MANUFACTURING PROCESS

Section
 219.660 Applicability
 219.666 Control Requirements
 219.667 Compliance Schedule
 219.668 Testing
 219.670 Recordkeeping and Reporting for Exempt Emission Units
 219.672 Recordkeeping and Reporting for Subject Emission Units

SUBPART DD: AEROSOL CAN FILLING

Section
 219.680 Applicability
 219.686 Control Requirements
 219.688 Testing
 219.690 Recordkeeping and Reporting for Exempt Emission Units
 219.692 Recordkeeping and Reporting for Subject Emission Units

SUBPART GG: MARINE TERMINALS

Section
 219.760 Applicability
 219.762 Control Requirements
 219.764 Compliance Certification
 219.766 Leaks
 219.768 Testing and Monitoring
 219.770 Recordkeeping and Reporting
 219.875 Applicability of Subpart BB (Renumbered)
 219.877 Emissions Limitation at Polystyrene Plants (Renumbered)
 219.879 Compliance Date (Repealed)
 219.881 Compliance Plan (Repealed)
 219.883 Special Requirements for Compliance Plan (Repealed)

219.886 Emissions Testing (Renumbered)

SUBPART PP: MISCELLANEOUS FABRICATED PRODUCT MANUFACTURING PROCESSES

Section

219.920 Applicability
 219.923 Permit Conditions (Repealed)
 219.926 Control Requirements
 219.927 Compliance Schedule
 219.928 Testing

SUBPART QQ: MISCELLANEOUS FORMULATION MANUFACTURING PROCESSES

Section

219.940 Applicability
 219.943 Permit Conditions (Repealed)
 219.946 Control Requirements
 219.947 Compliance Schedule
 219.948 Testing

SUBPART RR: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING PROCESSES

Section

219.960 Applicability
 219.963 Permit Conditions (Repealed)
 219.966 Control Requirements
 219.967 Compliance Schedule
 219.968 Testing

SUBPART TT: OTHER EMISSION UNITS

Section

219.980 Applicability
 219.983 Permit Conditions (Repealed)
 219.986 Control Requirements
 219.987 Compliance Schedule
 219.988 Testing

SUBPART UU: RECORDKEEPING AND REPORTING

Section

219.990 Exempt Emission Units
 219.991 Subject Emission Units

Section 219.Appendix A: List of Chemicals Defining Synthetic Organic Chemical and Polymer Manufacturing

Section 219.Appendix B: VOM Measurement Techniques for Capture Efficiency

- Section 219.Appendix C: Reference Test Methods for Air Oxidation Processes
- Section 219.Appendix D: Coefficients for the Total Resource Effectiveness Index (TRE) Equation
- Section 219.Appendix E: List of Affected Marine Terminals

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 R94-12 at 18 Ill. Reg. 14973, effective September 21, 1994; amended in R94-15 at 18 Ill. Reg. 16379, effective November 4, 1994; amended in R94-16 at 18 Ill. Reg. _____, effective _____; amended in R94-33 at 18 Ill. Reg. _____, effective _____.

SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES

Section 219.500 Applicability for Batch Operations

- a) The control requirements set forth in Section 219.501 of this Subpart shall apply to:
- 1) Process vents associated with batch operations at sources identified by any of the following four-digit standard industrial classification ("SIC") codes, as defined in the 1987 edition of the Federal Standard Industrial Classification Manual: SIC 2821, 2833, 2834, 2861, 2865, 2869, and 2879; and
 - 2) All batch operations at Stepan Company's Millsdale manufacturing facility, Elwood, Illinois.
- b) The requirements of Sections 219.500 through 219.506 shall not apply to:
- 1) Any emission unit included within the category specified in 35 Ill. Adm. Code Part 219, Subparts B or T;
 - 2) Any emission unit included within the category specified in Sections 219.520 through 219.527 of this Subpart; and

- 3) Any emission unit included within an Early Reduction Program, as specified in 40 CFR Part 63, and published in 57 Fed. Reg. 61970 (December 29, 1992), evidenced by a timely enforceable commitment approved by USEPA.
- c) The following single unit operations and batch process trains are subject to this Subpart but are considered to be de minimis and are, therefore, exempt from the control requirements of Section 219.501 of this Subpart. However, the recordkeeping and reporting requirements in Section 219.505 of this Subpart shall apply to such de minimis single unit operations and batch process trains:
- 1) Within a batch operation, any single unit operation with uncontrolled total annual mass emissions of less than or equal to 500 lb/yr of VOM. Such single unit operations are also excluded from the calculation of the total annual mass emissions for a batch process train. If the uncontrolled total annual mass emissions from such exempt single unit operation exceed 500 lb/yr of VOM in any subsequent year, the source shall calculate applicability in accordance with subsection (d) of this Section for both the individual single unit operation and the batch process train containing the single unit operation; and
 - 2) Any batch process train containing process vents that have, in the aggregate, uncontrolled total annual mass emissions, as determined in accordance with Section 219.502(a) of this Subpart, of less than 30,000 lb/yr of VOM for all products manufactured in such batch process train.
- d) The applicability equations in subsection (e) of this Section, which require the calculation of uncontrolled total annual mass emissions and flow rate value, shall be used to determine whether a single unit operation or a batch process train is subject to the control requirements set forth in Section 219.501 of this Subpart. The applicability equation shall be applied to the following:
- 1) Any single unit operation with uncontrolled total annual mass emissions that exceed 500 lb/yr and with a VOM concentration greater than 500 ppmv. In this individual determination, no applicability analysis shall be performed for any single unit operation with a VOM concentration of less than or

equal to 500 ppmv; and

- 2) Any batch process train containing process vents which, in the aggregate, have uncontrolled total annual mass emissions of 30,000 lb/yr or more of VOM from all products manufactured in the batch process train. Any single unit operation with uncontrolled total annual mass emissions exceeding 500 lb/yr, regardless of VOM concentration, shall be included in the aggregate applicability analysis.

e) Applicability equations

- 1) The applicability equations in this subsection are specific to volatility.

- 2) For purposes of this subsection, the following abbreviations apply:

A) FR = Vent stream flow rate, scfm;

B) UTAME = Uncontrolled total annual mass emissions of VOM, expressed as lb/yr;

C) WAV = Weighted average volatility;

D) MVOM_i = Mass of VOM component i; and

E) MWVOM_i = Molecular weight of VOM component i; and

F) VP_i = Vapor pressure of VOM component i.

- 3) Weighted average volatility shall be calculated as follows:

$$WAV = \frac{\sum_{i=1}^n \left[(VP_i) \times \frac{(MVOM_i)}{(MWVOM_i)} \right]}{\sum_{i=1}^n \left[\frac{(MVOM_i)}{(MWVOM_i)} \right]}$$

- 4) For purposes of determining applicability, flow rate values shall be calculated as follows:

A) Low WAV has a vapor pressure less than or equal to 75 mmHg at 20°C (68°F), and shall

use the following equation:

$$FR = [0.07 (UTAME)] - 1,821$$

- B) Moderate WAV has a vapor pressure greater than 75 mmHg but less than or equal to 150 mmHg at 20°C (68°F), and shall use the following equation:

$$FR = [0.031 (UTAME)] - 494$$

- C) High WAV has a vapor pressure greater than 150 mmHg at 20°C (68°F), and shall use the following equation:

$$FR = [0.013 (UTAME)] - 301$$

- 5) To determine the vapor pressure of VOM, the applicable methods and procedures in Section 219.111 of this Part shall apply.

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

Section 219.501 Control Requirements for Batch Operations

- a) Every owner or operator of a single unit operation with an average flow rate, as determined in accordance with Section 219.502(b) of this Subpart, below the flow rate value calculated by the applicability equations contained in Section 219.500(e) of this Subpart, shall reduce uncontrolled VOM emissions from such single unit operation by an overall efficiency, on average, of at least 90 percent, or 20 ppmv, per batch cycle.
- b) Every owner or operator of a batch process train with an average flow rate, as determined in accordance with Section 219.502(b)(2) of this Subpart, below the flow rate value calculated by the applicability equations contained in Section 219.500(e) of this Subpart, shall reduce uncontrolled VOM emissions from such batch process train by an overall efficiency, on average, of at least 90 percent, or 20 ppmv, per batch cycle. For purposes of demonstrating compliance with the emission limitations set forth in this Section, any control device meeting the criteria in subsection (c) of this Section shall be deemed to achieve a control efficiency of 90 percent, or 20 ppmv, per batch cycle, as applicable.
- c) Notwithstanding subsections (a) or (b) of this Section, any source that has installed on or before March 15,

1995, any control device which is demonstrated to the Agency's satisfaction to be unable to meet the applicable control requirements of this Section, scrubber, or shell and tube condenser using a non-refrigerated cooling media, and such device achieves at least 81 percent control efficiency of VOM emissions, is required to meet the 90 percent emission limitation or 20 ppmv VOM concentration set forth in subsections (a) or (b) of this Section, as applicable, upon the earlier to occur of the date the device is replaced for any reason, including, but not limited to, normal maintenance, malfunction, accident, and obsolescence, or December 31, 1999. A scrubber, shell and tube condenser using a non-refrigerated cooling media, or other control device meeting the criteria of this subsection is considered replaced when:

- 1) All of the device is replaced; or
- 2) When either 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 control device that complies with the 90 percent emission limitation or 20 ppmv VOM concentration level in subsection (a) of this Section, as applicable.
- d) If a boiler or process heater is used to comply with this Section, the vent stream shall be introduced into the flame zone of the boiler or process heater.
- e) If a flare is used to comply with this Section, 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.

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

Section 219.502 Determination of Uncontrolled Total Annual Mass Emissions and Actual Weighted Average Flow Rate Values for Batch Operations

- a) Uncontrolled total annual mass emissions shall be determined by the following methods:
 - 1) Direct process vent emissions measurements taken

prior to any release to the atmosphere, following any recovery device and prior to any control device, provided such measurements conform with the requirements of measuring the mass flow rate of VOM incoming to the single unit operation as set forth in Section 219.503(f)(2), (f)(3)(A) and (f)(3)(B) of this Subpart; or

2) Engineering estimates of the uncontrolled VOM emissions from a process vent or process vents, in the aggregate, within a batch process train, multiplied by the potential or permitted number of batch cycles per year as follows:

A) Engineering estimates of the uncontrolled VOM emissions shall be based upon accepted chemical engineering principles, measurable process parameters, or physical or chemical laws and their properties. Examples of 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; and

iii) Estimation of VOM concentrations based on saturation conditions.

B) All data, assumptions and procedures used in any engineering estimate shall be documented.

b) Average flow rate shall be determined by any of the following methods:

1) Direct process vent flow rate measurements taken prior to any release to the atmosphere, following any recovery device and prior to any control device, provided such measurements conform with the requirements of measuring incoming volumetric flow rate set forth in Section 219.503(e)(2) of this Subpart;

2) Average flow rate for a single unit operation having multiple emission events or batch process trains shall be the weighted average flow rate, calculated as follows:

$$\text{WAF} = \frac{\sum_{i=1}^n [\text{AFR}_i \times \text{ADE}_i]}{\sum_{i=1}^n (\text{ADE}_i)}$$

where:

WAF = Actual weighted average flow rate for a single unit operation or batch process train;
 AFR_i = Average flow rate per emission event;
 ADE_i = Annual duration of emission event; and
 n = Number of emission events.

3) Engineering estimates calculated in accordance with the requirements in subsection (a)(2) of this Section.

c) For purposes of determining the average flow rate for steam vacuuming systems, the steam flow shall be included in the average flow rate calculation.

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

Section 219.503 Performance and Testing Requirements for Batch Operations

- a) Upon the Agency's request, the owner or operator of a batch operation shall conduct testing to demonstrate compliance with Section 219.501 of this Subpart. The owner or operator shall, at its own expense, conduct such tests in accordance with the applicable test methods and procedures specified in Section 219.503(d), (e), and (f) of this Subpart.
- b) Notwithstanding subsection (a) of this Section, flares and process boilers used to comply with control requirements of Section 219.501 of this Subpart shall be exempt from performance testing requirements.
- c) When a flare is used to comply with the control requirements of Section 219.501 of this Subpart, the flare shall comply with the requirements of 40 CFR 60.18, incorporated by reference at Section 219.112 of this Part.

- d) The owner or operator of a batch operation that is exempt from the control requirements of Section 219.501 of this Subpart shall demonstrate, upon the Agency's request, the absence of oversized gas moving equipment in any manifold. Gas moving equipment shall be considered oversized if it exceeds the maximum requirements of the exhaust flow rate by more than 30 percent.
- e) For the purpose of demonstrating compliance with the control requirements in Section 219.501 of this Subpart, the batch operation shall be run at representative operating conditions and flow rates during any performance test.
- f) The following methods in 40 CFR 60, Appendix A, incorporated by reference at Section 219.112 of this Part, shall be used to demonstrate compliance with the reduction efficiency requirement set forth in Section 219.501 of this Subpart:
- 1) Method 1 or 1A, as appropriate, for selection of the sampling sites if the flow measuring device is not a rotameter. The control device inlet sampling site for determination of vent stream VOM composition reduction efficiency shall be prior to the control device and after the control device;
 - 2) Method 2, 2A, 2C, or 2D, as appropriate, for determination of gas stream volumetric flow rate flow measurements, which shall be taken continuously. No traverse is necessary when the flow measuring device is an ultrasonic probe. ;
 - 3) Method 25A or Method 18, if applicable, to determine the concentration of VOM in the control device inlet and outlet;
 - A) The sampling time for each run will be the entire length of the batch cycle in which readings shall be taken continuously, if Method 25A is used, or as often as is possible using Method 18, with a maximum of 15-minute intervals between measurements throughout the batch cycle;
 - B) The mass emission rate from the process vent or inlet to the control device shall be determined by combining concentration and flow rate measurements taken simultaneously at sampling sites selected in accordance with subsection (f)(1) of this Section throughout

the batch cycle;

- C) The mass emission rate from the control device outlet shall be obtained by combining concentration and flow rate measurements taken simultaneously at sampling sites selected in accordance with subsection (f)(1) of this Section throughout the batch cycle; and
- D) The efficiency of the control device shall be determined by integrating the mass emission rates obtained in subsections (c)(3)(A) and (c)(3)(B) of this Section, over the time of the batch cycle and dividing the difference in inlet and outlet mass flow totals by the inlet mass flow total.
- g) Upon request by the Agency to conduct testing, an owner or operator of a batch operation which has installed a scrubber, a shell and tube condenser using a non-refrigerated cooling media, or any other control device which meets the criteria of Section 219.501(c) of this Subpart, shall demonstrate that such device achieves the control efficiency applicable within Section 219.501 of this Subpart upon the earlier to occur of the date the device is replace or December 31, 1999.
- h) The owner or operator of a batch operation may propose an alternative test method or procedures to demonstrate compliance with the control requirements set forth in Section 219.501 of this Subpart. Such method or procedures shall be approved by the Agency and USEPA as evidenced by federally enforceable permit conditions.

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

Section 219.504 Monitoring Requirements for Batch Operations

- a) Every owner or operator using an afterburner to comply with Section 219.501 of this Subpart, shall install, calibrate, maintain and operate, according to manufacturer's specifications, temperature monitoring devices with an accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius, equipped with continuous recorders.
- 1) Where a catalytic afterburner is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

- 2) Where an afterburner other than a catalytic afterburner is used, a temperature monitoring device shall be installed in the combustion chamber.
- b) Every owner or operator using a flare to comply with Section 219.501 of this Subpart, shall install, calibrate, maintain and operate, according to manufacturer's specifications, a heat sensing device, such as an ultra-violet beam sensor or thermocouple, at the pilot light to indicate continuous presence of a flame.
 - c) Every owner or operator using a scrubber to comply with this Section 219.501 of this Subpart, shall install, calibrate, maintain, and operate, according to manufacturer's specifications, the following:
 - 1) A temperature monitoring device for scrubbant liquid having an accuracy of ± 1 percent of the temperature being monitored expressed in degrees Celsius and a specific gravity device for scrubbant liquid, each equipped with a continuous recorder; or
 - 2) A VOM monitoring device used to indicate the concentration of VOM exiting the control device based on a detection principle such as infra-red photoionization, or thermal conductivity, each equipped with a continuous recorder.
 - d) Every owner or operator using a condenser to comply with Section 219.501 of this Subpart, shall install, calibrate, maintain, and operate, according to manufacturer's specifications, the following:
 - 1) A condenser exit 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
 - 2) A VOM monitoring device used to indicate the concentration of VOM such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.
 - e) Every owner or operator using a carbon adsorber to comply with this Subpart shall install, calibrate, maintain, and operate, according to the manufacturer's specifications the following equipment:
 - 1) An integrating regeneration stream flow monitoring

device having an accuracy of \pm 10 percent, and a carbon bed temperature monitoring device having an accuracy of \pm 1 percent of the temperature being monitored expressed in degrees Celsius, both equipped with a continuous recorder; or

- 2) A VOM monitoring device used to indicate the concentration level or VOM exiting such device based on a detection principle such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.
- f) Every owner or operator using a boiler or process heater with a design heat input capacity less than 44 Mw to comply with Section 219.501 of this Subpart, shall install, calibrate, maintain, and operate, according to the manufacturer's specifications, a temperature monitoring device in the firebox with an accuracy of \pm 1 percent of the temperature being measured expressed in degrees Celsius, equipped with a continuous recorder. Any boiler or process heater in which all process vent streams are introduced with primary fuel is exempt from this requirement.
- g) The owner or operator of a process vent shall be permitted to monitor by an alternative method or may monitor parameters other than those listed in subsections (a) through (f) of this Section, if approved by the Agency and USEPA. Such alternative method or parameters shall be contained in the source's operating permit as federally enforceable permit conditions.
- h) Notwithstanding subsections (a) through (g) of this Section, sources using a scrubber, shell and tube condenser using a non-refrigerated cooling media, or other control device meeting the criteria of Section 219.501(c) of this Subpart, are required to monitor compliance with the requirements of this Subpart on and after the earlier to occur of the date such device is replaced for any reason or December 31, 1999.

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

Section 219.505 Reporting and Recordkeeping for Batch Operations

- a) Every owner or operator of a de minimis single unit operation or batch process train exempt under Section 219.500(c)(1) or (c)(2) of this Subpart, shall keep records of the uncontrolled total annual mass emissions

for any de minimis single unit operation or batch process train, as applicable, and documentation verifying these values or measurements. The documentation shall include the engineering calculations or measurements coupled with the potential or permitted number of batch cycles per year if the uncontrolled total annual mass emissions is obtained from measurements made in accordance with Section 219.503 of this Subpart.

b) Every owner or operator of a single unit operation exempt under Sections 219.500(b)(3) or (d) of this Subpart shall keep the following records:

- 1) The uncontrolled total annual mass emissions and documentation verifying these values or measurements. The documentation shall include the calculations or measurements coupled with the permitted or permitted number of emission events per year if the uncontrolled total annual mass emissions is obtained from measurements made in accordance with Section 219.503 of this Subpart; and
- 2) The average flow rate in scfm and documentation verifying this value.

c) Every owner or operator of a batch operation subject to the control requirements of Section 219.501 of this Subpart shall keep records of the following parameters required to be monitored under Section 219.504 of this Subpart:

- 1) If using a thermal or catalytic afterburner to comply with Section 219.501 of this Subpart, records indicating the average combustion chamber temperature of the afterburner (or the average temperature upstream and downstream of the catalyst bed for a catalytic afterburner), measured continuously and averaged over the same time period as the performance test;
- 2) If using a flare (i.e., stream-assisted, air-assisted or nonassisted) to comply with Section 219.501 of this Subpart, continuous records of the flare pilot flame monitoring and records of all periods of operations during which the pilot flame is absent. For purposes of determining compliance with 40 CFR 60.18, incorporated by reference at 219.112 of this Part, records shall also be kept indicating heat content determinations, flow rate measurements and the exit velocity determinations.

- 3) If using any of the following as a control device, the following records:
- A) Where a scrubber is used, the exit specific gravity (or alternative parameter which is a measure of the degree of absorbing liquid saturation, if approved by the Agency) and the average exit temperature of the absorbing liquid, measured continuously and averaged over the same time period as the performance test (both measured while the vent stream is routed normally);
 - B) Where a condenser is used, the average exit (product side) temperature measured continuously and averaged over the same time period as the performance test while the vent stream is routed normally;
 - C) Where a carbon adsorber is used, the total stream mass flow measured continuously and averaged over the same time period as the performance test (full carbon bed cycle), 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 routed normally); or
 - D) As an alternative to subsections (c)(3)(A), (c)(3)(B), or (c)(3)(C) of this Section, at a minimum, records indicating the concentration level or reading indicated by the VOM monitoring device at the outlet of the scrubber, condenser, or carbon adsorber, measured continuously and averaged over the same time period as the performance test (while the vent stream is routed normally).
- d) Every owner or operator of an single unit operation claiming a vent stream concentration exemption level, as set forth in Section 218.500(d)(1) of this Subpart, shall maintain records to indicate the vent stream concentration is less than or equal to 500 ppmv, and shall notify the Agency in writing if the vent stream concentration at any time equals or exceeds 500 ppmv, within 30 days of such event. Such notification shall include a copy of all records of such event.
- e) An owner or operator of a batch operation subject to the control requirements of Section 219.501 of this

Subpart may maintain alternative records other than those listed in subsection (c) of this Section. Any alternative recordkeeping shall be approved by the Agency and USEPA and shall be contained in the source's operating permit as federally enforceable permit conditions.

- f) Notwithstanding subsections (a) through (f) of this Section, any owner or operator of a batch operation which uses either a scrubber, shell and tube condenser using non-refrigerated cooling media, or other control device meeting the criteria of Section 219.501(c) of this Subpart, are required to monitor compliance with the requirements of this Subpart on and after the earlier to occur of the date such device is replaced for any reason or December 31, 1999.
- g) The owner or operator of a de minimis single unit operation or batch process train exempt from the control requirements of Section 219.501(c) of this Subpart shall notify the Agency in writing if the uncontrolled total annual mass emissions from such de minimis single unit operation or batch process train exceed the threshold in Section 219.501(c)(1) or (c)(2) of this Subpart, respectively, within 60 days after the event occurs. Such notification shall include a copy of all records of such event.
- h) Every owner or operator of a batch operation required to keep records under this Section shall maintain such records at the source for a minimum period of three years and shall make all such records available to the Agency upon request.

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

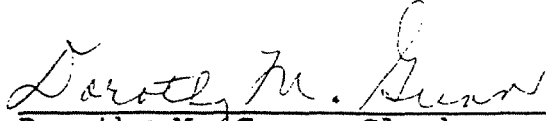
Section 219.506 Compliance Date

Every owner or operator of a batch operation subject to Sections 219.500 through 219.506 of this Subpart shall comply with its standards, limitations and mandates by March 15, 1996, or upon initial start up, whichever is later.

(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 18th day of November, 1994, by a vote of 6-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board