

ILLINOIS POLLUTION CONTROL BOARD  
April 25, 1991

IN THE MATTER OF: )  
 )  
AMENDMENTS TO 35 ILL. ) R88-14  
ADM. CODE 211 AND 215 ) (Rulemaking)  
(PHARMACEUTICALS) )

ADOPTED RULE. FINAL ORDER.

OPINION AND ORDER OF THE BOARD (by J.D. Dumelle):

This matter is before the Board on a Joint Proposal filed by Abbott Laboratories ("Abbott") and the Illinois Environmental Protection Agency ("Agency"). The proposal was proposed by the Board for Second First Notice on May 10, 1990. Subsequent to First Notice, negotiations continued between the participants as well as the USEPA. Both Abbott and the Agency filed comments encouraging the Board to proceed to Second Notice so long as certain corrections were made which would insure federal approvability. On January 10, 1991, the Board proposed the Joint Proposal for Second Notice. On March 19, 1991 the Joint Committee on Administrative Rules (JCAR) issued a certificate of no objection after the Board made some non-substantive alterations.

Procedural History

Abbott first filed this proposed rulemaking in May of 1988 as a result of what the company perceived to be deficiencies in R86-10, the RACT Pharmaceutical Manufacturing Regulations adopted by the Board on April 7, 1988. During the promulgation of R86-10 and up until the present, both the Board and the USEPA have undertaken rulemakings regarding RACT regulations. In R89-16, the Board adopted regulations as part of the State Implementation Plan (SIP). The USEPA has also promulgated RACT regulations under its duty to develop a Federal Implementation Plan (FIP). Due to the fact that many of these regulations overlapped and Abbott felt that some were impossible to "live with", the company sought site-specific relief in May of 1988.

After five hearings and four amended proposals, Abbott, the Agency and the USEPA transformed the regulation into one of general applicability which would constitute a SIP revision. Both Abbott and the Agency, however, indicated that USEPA approval will not be forthcoming until the Board corrects the definition of Volatile Organic Material (VOM) as it appears in R89-16. The participants filed a joint proposal to this effect on November 13, 1990 and the Board made the appropriate revisions in the VOM definition in the Second Notice package.

FIP

USEPA's proposed pharmaceutical RACT rules were the subject of considerable testimony and comment throughout this proceeding. As previously noted, USEPA has adopted the FIP, which included Pharmaceutical Manufacturing RACT regulations. Subsequent to the June hearings, USEPA published its final FIP rules at 55 Fed. Reg. 26814 (June 29, 1990). A copy of the FIP regulatory preamble and rules was supplied to the Board as a joint public comment and is included as Attachment A to the Agency's final comments. In all apparent aspects the relevant language with respect to the pharmaceutical regulations in the pre-publication copy found at Exhibit 37 is the same as in this final FIP. As Mr. Romaine of the Agency testified, the FIP pharmaceutical rules are substantially identical to the Fourth Amended Proposal.

This proceeding has evolved from one of a site-specific regulatory proposal to a general rulemaking that also corrects the stated deficiencies put forward by USEPA in their December 29, 1989 Notice of Proposed Rulemaking, certain other suggested modifications regarding enforceability raised by USEPA, and the changes to the definitions described in Mr. Steve Rothblatt's (USEPA) letter of October 5, 1990. The Fourth Amended Proposal, coupled with the latest definitional changes, has been determined to be acceptable by USEPA. It in large part formed the template for the FIP Pharmaceutical Regulations adopted by USEPA on June 29, 1990. This joint proposal is fully supported by the record presented to the Board. It represents compromises by Abbott in terms of limitation on the relief that it originally sought in this proceeding and constitutes a regulation which the record shows is RACT for the two known affected plants in Illinois. It addresses the enforceability and recordkeeping requirements which are necessary to ensure that the Agency has the flexibility to enforce the regulations. The testimony presented to support the Fourth Amended proposal consisted of the testimony of William Robertson and Christopher Romaine at the June 27, 1990 hearing.

Mr. Robertson, of Abbott Labs, presented a detailed section by section analysis of the changes between the Second Amended Proposal, which he addressed during testimony on March 13, 1990 and the Fourth Amended Proposal. His section-by-section analysis is presented at pages 9 through 32 of the June 27, 1990 transcript. Mr. Romaine testified in support of the specific recordkeeping, testing and other modifications that he deemed necessary to resolve the concerns of USEPA and those that he had raised in his testimony on March 13, 1990. (Tr. at 36-61).

As Mr. Robertson testified, the Fourth Amended Proposal resolves the problems that were contained in R86-10 and resolves the issues raised by USEPA. The Fourth Amended Proposal contains a number of definitions that USEPA and the Agency believe are necessary at Section 211.112. (Tr. at 15-17).

The Fourth Amended Proposal contains revised testing methods set forth at Section 215.102 in response to USEPA's proposed disapproval. (Tr. at 17-18). Specifically, Section 215.480(a) clarifies the rule to ensure that those sources which contain specific alternative applicability cutoff levels are subject to the RACT regulations if their emissions exceed 100 pounds per day. The Fourth Amended Proposal in Section 215.480(d) was amended to correct two drafting errors found in the original Subpart T regulations. A specific exemption level of 2.5 tons per year is added for the air suspension coater/dryer located at Abbott Park and the applicability cutoff level for each tunnel dryer was raised from 5.0 to 7.5 tons per year. These specific applicability cutoff levels represent a reduction from that which Abbott had originally sought in this proceeding. As testified by Abbott, while the average emissions for each tunnel dryer may be less than 5 tons per year, individual tunnel dryers may emit greater than 5 tons per year based upon production scheduling needs. Abbott had originally proposed that the limitation on the tunnel dryers be based on an average concept or on total emissions for all eight tunnel dryers. In the Fourth Amended Proposal the participants agreed that an exemption level no lower than 7.5 tons per year for any one dryer was necessary to reflect the variations in production from each dryer.

R88-14 also addresses the methodology by which vapor pressure of certain materials is determined. Vapor pressure is an important parameter for the pharmaceutical rules. The vapor pressure of volatile organic material determines the required outlet temperatures for the condensers to be used on centrifuges and certain other equipment. Vapor pressure also has a role in the applicability of other RACT rules, including the rules addressing material storage in Part 215, Subpart B, and the rules for solvent cleaning in Part 215, Subpart E. The determination of vapor pressure was considered as related to both pharmaceutical manufacturing and other affected source categories. Corrections to the current rules were proposed to clarify the methodology for determination of vapor pressure. The proposed corrections to methodology for vapor pressure determination in R88-14 did not generate response from affected persons other than Abbott.

Section 215.480 also governs emissions testing by analyzing emissions source operation or material throughput from daily and annual data. This is significant because the items that will be tested will vary depending on how VOM emissions will be determined for a particular emission source. For example, appropriate process records might be the usage of VOM solvent, the usage of coatings and VOM content of such coatings, amount and type of production, in lbs. or batches (as related to an established emission factor per lb. or batch), or hours of operation (as related to an established hourly VOM emission rate). Appropriate records will also be needed to demonstrate use of control devices, if any are

present. For example, control equipment related records might be in terms of VOM recovery by a carbon adsorber, data confirming the operation of a control device, or further information on the cooling water supply of a condenser. The proposed language provides flexibility to regulated sources to maintain records as needed, given the type of emission source, control device and operation. However the specific form of records for a particular emission source will be indirectly specified as a result of the demonstration required by Section 215.489(d)(3). The appropriate records and the demonstration must be consistent.

Section 215.481, Control of Reactors, Distillation Units, Crystallizers, Centrifuges and Vacuum Dryers, has been amended to provide that in addition to surface condensers other than VOM control devices such as scrubbers, carbon adsorbers, thermal incinerators, catalytic afterburners or other pollution control devices may be utilized provided they achieve at least a 90% reduction in emissions of volatile organic material. This change is necessary as pointed out in the testimony of Mr. Robertson because there are certain volatile organic materials which are not controllable by the use of a surface condenser, which was the only specified control device in the original Subpart T regulations. (Tr. at 24-25).

An exception was added to Sections 215.481(b), and 482(b) with respect to the necessity to keep centrifuges and filters enclosed at all times "except as production, sampling, maintenance or inspection procedures require operator access". This exception is necessary because these procedures are necessary and are part of the day-to-day operation of this equipment at part of the normal course of manufacturing. A similar provision was included in the Subpart T Regulations originally enacted by the Board for in-process tanks at Section 215.585. (Tr. at 25-28).

In Section 215.487, Testing, the limitation of "upon reasonable request by the agency" was added to Subpart A and certain alternative procedures have been deleted from this rule. The alternative methods have been provided under Section 215.480(h). The limitation in subsection (a) is consistent with the limitations adopted by the Board in the other RACT correction proceedings in R89-16. The Board believes that the same "reasonable" limitation should be imposed in the pharmaceutical rules as in other similar RACT regulations. (Tr. at 28-29). This is important because the listed test methods have different applicabilities. From a technical perspective, the applicability depends on the composition of the VOM - one component or several components, similar chemicals or different chemicals, or a particular family of chemicals. The applicability issue is addressed in each of the test methods themselves. There is also a regulatory perspective on the applicability of test methods. Testing for purposes of applicability, i.e., pounds of VOM, requires an "exact" measurement of the VOM in the exhaust from an

emission source. Testing for compliance, i.e., control efficiency, requires a comparative measurement of VOM before and after the control device. A simpler test method may be possible, particularly if the composition of the VOM is not altered by the control device. In general terms, Method 18 can be used for all purposes; that is, it provides an accurate measurement of VOM irrespective of composition. It is, however, more complex. Method 25 and 25A may substitute for Method 18 in certain situations. Method 25 provides results in terms of total gaseous non-methane organics as carbon. Method 25A is suitable for situations where the response of a Flame Ionization Detector can be reliably calibrated for the particular composition of a VOM stream.

Section 215.488, Monitors for Air Pollution Control Equipment, has been modified in the Fourth Amended Proposal to require in subsection (a)(4) that the outlet gas temperatures for a refrigerated condenser be monitored and that under subsection (a)(5) the temperature of non-refrigerated condenser coolant supply systems be monitored. (Tr. at 29-30).

Section 215.489, Recordkeeping, has been added to ensure the Abbott maintains the necessary records so that the Agency can enforce the regulations. The Board believes that these requirements are reasonable.

Existing Section 215.489, Compliance Schedule, has been renumbered as 215.490. The rule has been modified from that found in Subpart T by providing a compliance date of April 30, 1991 as the date by which pharmaceutical companies would have to comply with the regulations for existing sources (i.e., construction or a modification of which has commenced prior to the effective date of these regulations). (Tr. at 30-31). A pharmaceutical company would, under these regulations, have to complete any process change or modification to reduce emissions below the applicability cutoff level or install control equipment where the sources would be subject to the regulations by virtue of being above the applicable cutoff limitations. This change is necessary as Abbott has proposed deletion of specific alternative cutoff limitations for certain sources at its North Chicago plant. Abbott will need this time to either add the required add-on control or make the necessary process decision which will give rise to modifications or changes that will be required as a result of the Board's adoption of these rules. (Tr. at 33). The inclusion of a compliance date of April 30, 1991 is consistent with that of the compliance date adopted by USEPA of July 1, 1991 in the FIP .

Based partly on Abbott, the Agency and USEPA's protracted negotiations which encompass not only this rule, but R86-10, R89-16 and the current rules before this Board which involve RACT deficiencies, the Board will today proceed with final adoption. The Board believes that these regulations represent RACT and are both economically reasonable and technologically feasible. It is

estimated that the emissions reduction as a result of this joint proposal will be at least 32.3 tons per year in the North Chicago Area.

ORDER

The Board hereby adopts the following amendments to 35 Ill. Adm. Code 211 and 215. The Board directs the Clerk to submit the adopted amendments to the Administrative Code Division of the Secretary of State's Office.

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

PART 211  
DEFINITIONS AND GENERAL PROVISIONS

SUBPART A: GENERAL PROVISIONS

Section	
211.101	Incorporations by Reference
211.102	Abbreviations and Units

SUBPART B: DEFINITIONS

Section	
211.121	Other Definitions
211.122	Definitions

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 of the Environmental Protection Act (Ill. Rev. Stat. 1987, ch. 111½, pars. 1009, 1010 and 1027, as amended by P.A. 86-366, effective January 1, 1990).

**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. \_\_\_\_\_, effective \_\_\_\_\_.

## SUBPART B: DEFINITIONS

### Section 211.122

### Definitions

"Accelacota": a pharmaceutical coating operation which consists of a horizontally rotating perforated drum in which tablets are placed, a coating is applied by spraying and the coating is dried by the flow of air across the drum through the perforations.

"Accumulator": The reservoir of a condensing unit receiving the condensate from a surface condenser.

"Acid Gases": For the purposes of Section 9.4 of the Environmental Protection Act (the Act) (Ill. Rev. Stat. 1987, ch. 111 ½, par. 1009.4), hydrogen chloride, hydrogen fluoride and hydrogen bromide, which exist as gases, liquid mist, or any combination thereof.

"Actual Heat Input": The quantity of heat produced by the combustion of fuel using the gross heating value of the fuel.

"Aeration": The practice of forcing air through bulk stored grain to maintain the condition of the grain.

"Afterburner": A device in which materials in gaseous effluents are combusted.

"Air Dried Coating": Coatings that dry by the use of air or forced air at temperatures up to 363.15° K (194° F).

"Air suspension coater/dryer": a pharmaceutical coating operation which consists of vertical chambers in which tablets or particles are placed, and a coating is applied and then dried while the tablets or particles are kept in a fluidized state by the passage of air upward through the chambers.

"Annual Grain Through-Put": Unless otherwise shown by the owner or operator, annual grain through-put

for grain-handling operations, which have been in operation for three consecutive years prior to June 30, 1975, shall be determined by adding grain receipts and shipments for the three previous fiscal years and dividing the total by 6. The annual grain through-put for grain-handling operations in operation for less than three consecutive years prior to June 30, 1975, shall be determined by a reasonable three-year estimate; the owner or operator shall document the reasonableness of his three-year estimate.

"Architectural Coating": Any coating used for residential or commercial buildings or their appurtenances, or for industrial buildings which is site applied.

"Asphalt": The dark-brown to black cementitious material (solid, semisolid or liquid in consistency) of which the main constituents are bitumens which occur naturally or as a residue of petroleum refining.

"Asphalt Prime Coat": A low-viscosity liquid asphalt applied to an absorbent surface as the first of more than one asphalt coat.

"Automobile": Any first division motor vehicle as that term is defined in the Illinois Vehicle Code (Ill. Rev. Stat. 1987, ch. 95½, pars 1-100 et seq.).

"Automobile or Light-Duty Truck Manufacturing Plant": A facility where parts are manufactured or finished for eventual inclusion into a finished automobile or light-duty truck ready for sale to vehicle dealers, but not including customizers, body shops and other repainters.

"Batch Loading": The process of loading a number of individual parts at the same time for degreasing.

"Bead-Dipping": The dipping of an assembled tire bead into a solvent-based cement.

"British Thermal Unit": The quantity of heat required to raise one pound of water from 60° F to 61° F (abbreviated btu).

"Bulk Gasoline Plant": Any gasoline storage and distribution facility that receives gasoline from bulk gasoline terminals by delivery vessels and distributes gasoline to gasoline dispensing



facilities.

"Bulk Gasoline Terminal": Any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, and distributes gasoline to bulk gasoline plants or gasoline dispensing facilities.

"Can Coating": The application of a coating material to a single walled container that is manufactured from metal sheets thinner than 29 gauge (0.0141 in).

"Certified Investigation": A report signed by Illinois Environmental Protection Agency (Agency) personnel certifying whether a grain-handling operation (or portion thereof) or grain-drying operation is causing or tending to cause air pollution. Such report must describe the signatory's investigation, including a summary of those facts on which he relies to certify whether the grain-handling or grain-drying operation is causing or threatening or allowing the discharge or emission of any contaminant into the environment so as to cause or tend to cause air pollution in Illinois, either alone or in combination with contaminants from other sources, or so as to violate regulations or standards adopted by the Pollution Control Board (Board) under the Environmental Protection Act (Act). The certified investigation shall be open to a reasonable public inspection and may be copied upon payment of the actual cost of reproducing the original.

"Choke Loading": That method of transferring grain from the grain-handling operation to any vehicle for shipment or delivery which precludes a free fall velocity of grain from a discharge spout into the receiving container.

"Cleaning and Separating Operation": That operation where foreign and undesired substances are removed from the grain.

"Clear Coating": Coatings that lack color and opacity or are transparent using the undercoat as a reflectant base or undertone color.

"Closed Purge System": A system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow inducing devices that transport liquid or vapor from a piece

or pieces of equipment to a control device, or return the liquid or vapor to the process line.

"Closed Vent System": A system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device, or return the gas or vapor to the process line.

"Coal Refuse": Waste products of coal mining, cleaning and coal preparation operations containing coal, matrix material, clay and other organic and inorganic material.

"Coating Applicator": Equipment used to apply a surface coating.

"Coating Line": An operation where a surface coating is applied to a material and subsequently the coating is dried and/or cured.

"Coating Plant": Any building, structure or installation that contains a coating line and which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person (or by persons under common control).

"Coil Coating": The application of a coating material to any flat metal sheet or strip that comes in rolls or coils.

"Cold Cleaning": The process of cleaning and removing soils from surfaces by spraying, brushing, flushing or immersion while maintaining the organic solvent below its boiling point. Wipe cleaning is not included in this definition.

"Complete Combustion": A process in which all carbon contained in a fuel or gas stream is converted to carbon dioxide.

"Component": Any piece of equipment which has the potential to leak volatile organic material including, but not limited to, pump seals, compressor seals, seal oil degassing vents, pipeline valves, pressure relief devices, process drains and open ended valves. This definition excludes valves which are not externally regulated, flanges, and equipment in heavy liquid service. For purposes of 35 Ill. Adm. Code 215. Subpart Q, this definition also excludes bleed ports of gear pumps in polymer

service.

"Concentrated Nitric Acid Manufacturing Process": Any acid producing facility manufacturing nitric acid with a concentration equal to or greater than 70 percent by weight.

"Condensate": Hydrocarbon liquid separated from its associated gasses which condenses due to changes in the temperature or pressure and remains liquid at standard conditions.

"Control Device": Equipment, such as an afterburner, adsorber, scrubber, condenser, cyclone or baghouse used to remove or prevent the emission of air pollutants from a contaminated exhaust stream. For purposes of 35 Ill. Adm. Code 215, Subpart Q, an enclosed combustion device, vapor recovery system, flare, or closed container.

"ConveyORIZED Degreasing": The continuous process of cleaning and removing soils from surfaces utilizing either cold or vaporized solvents.

"Crude Oil": A naturally occurring mixture which consists of hydrocarbons and sulfur, nitrogen or oxygen derivatives of hydrocarbons and which is a liquid at standard conditions.

"Crude Oil Gathering": The transportation of crude oil or condensate after custody transfer between a production facility and a reception point.

"Custody Transfer": The transfer of produced petroleum and/or condensate after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

"Cutback Asphalt": Any asphalt which has been liquified by blending with petroleum solvents other than residual fuel oil and has not been emulsified with water.

"Degreaser": Any equipment or system used in solvent cleaning.

"Delivery Vessel": Any tank truck or trailer equipped with a storage tank that is used for the transport of gasoline to a stationary storage tank at a gasoline dispensing facility, bulk gasoline plant or bulk gasoline terminal.

"Distillate Fuel Oil": Fuel oils of grade No. 1 or 2 as specified in detailed requirements for fuel oil A.S.T.M. D-369-69 (1971).

"Dry Cleaning Facility": A facility engaged in the cleaning of fabrics using an essentially nonaqueous solvent by means of one or more solvent washes, extraction of excess solvent by spinning and drying by tumbling in an airstream. The facility includes, but is not limited to, washers, dryers, filter and purification systems, waste disposal systems, holding tanks, pumps and attendant piping and valves.

"Dump-Pit Area": Any area where grain is received at a grain-handling or grain-drying operation.

"Effective Grate Area": That area of a dump-pit grate through which air passes, or would pass, when aspirated.

"Effluent Water Separator": Any tank, box, sump or other apparatus in which any organic material floating on or entrained or contained in water entering such tank, box, sump or other apparatus is physically separated and removed from such water prior to outfall, drainage or recovery of such water.

"Emission Rate": Total quantity of any air contaminant discharge into the atmosphere in any one-hour period.

"Enclose": with respect to Subpart T, to cover any volatile organic liquid surface that is exposed to the atmosphere.

"End Sealing Compound Coat": A compound applied to can ends which functions as a gasket when the end is assembled on the can.

"Excess Air": Air supplied in addition to the theoretical quantity necessary for complete combustion of all fuel and/or combustible waste material.

"Excessive Release": A discharge of more than 295g (0.65 pounds) of mercaptans and/or hydrogen sulfide into the atmosphere in any five minute period.

"Existing Grain-Drying Operation": Any grain-

drying operation the construction or modification of which was commenced prior to June 30, 1975.

"Existing Grain-Handling Operation": Any grain-handling operation the construction or modification of which was commenced prior to June 30, 1975.

"Exterior Base Coat": An initial coating applied to the exterior of a can after the can body has been formed.

"Exterior End Coat": A coating applied by rollers or spraying to the exterior end of a can.

"External Floating Roof": A storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which is supported by the petroleum liquid being contained and is equipped with a closure seal between the deck edge and tank wall.

"Extreme Performance Coating": Coatings designed for exposure to any of the following: the ambient weather conditions, temperatures above 368.15° K (203° F), detergents, abrasive and scouring agents, solvents, corrosive atmospheres, or other similar extreme environmental conditions.

"Fabric Coating": The coating of a textile substrate.

"Final Repair Coat": The repainting of any coating which is damaged during vehicle assembly.

"Firebox": The chamber or compartment of a boiler or furnace in which materials are burned, but not the combustion chamber or afterburner of an incinerator.

"Flexographic Printing": The application of words, designs and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of elastomeric materials.

"Floating Roof": A roof on a stationary tank, reservoir or other container which moves vertically upon change in volume of the stored material.

"Freeboard Height": For open top vapor degreasers, the distance from the top of the vapor zone to the top of the degreaser tank. For cold cleaning

degreasers, the distance from the solvent to the top of the degreaser tank.

"Fuel Combustion Emission Source": Any furnace, boiler or similar equipment used for the primary purpose of producing heat or power by indirect heat transfer.

"Fuel Gas System": A system for collection of refinery fuel gas including, but not limited to, piping for collecting tail gas from various process units, mixing drums and controls and distribution piping.

"Fugitive Particulate Matter": Any particulate matter emitted into the atmosphere other than through a stack, provided that nothing in this definition or in 35 Ill. Adm. Code 212.Subpart K shall exempt any source from compliance with other provisions of 35 Ill. Adm. Code 212 otherwise applicable merely because of the absence of a stack.

"Gas Service": Means that the component contains process fluid that is in the gaseous state at operating conditions.

"Gasoline": Any petroleum distillate having a Reid vapor pressure of 4 pounds or greater.

"Gasoline Dispensing Facility": Any site where gasoline is transferred from a stationary storage tank to a motor vehicle gasoline tank used to provide fuel to the engine of that motor vehicle.

"Grain": The whole kernel or seed of corn, wheat, oats, soybeans and any other cereal or oil seed plant; and the normal fines, dust and foreign matter which results from harvesting, handling or conditioning. The grain shall be unaltered by grinding or processing.

"Grain-Drying Operation": Any operation, excluding aeration, by which moisture is removed from grain and which typically uses forced ventilation with the addition of heat.

"Grain-Handling and Conditioning Operation": A grain storage facility and its associate grain transfer, cleaning, drying, grinding and mixing operations.

"Grain-Handling Operation": Any operation where

one or more of the following grain-related processes (other than grain-drying operation, portable grain-handling equipment, one-turn storage space, and excluding flour mills and feed mills) are performed: receiving, shipping, transferring, storing, mixing or treating of grain or other processes pursuant to normal grain operations.

"Green Tire Spraying": The spraying of green tires, both inside and outside, with release compounds which help remove air from the tire during molding and prevent the tire from sticking to the mold after curing.

"Green Tires": Assembled tires before molding and curing have occurred.

"Gross Heating Value": Amount of heat produced when a unit quantity of fuel is burned to carbon dioxide and water vapor, and the water vapor condensed as described in A.S.T.M. D-2015-66, D-900-55, D-1826-64 and D-240-64.

"Heavy Liquid": Liquid with a true vapor pressure of less than 0.3 kPa (0.04 psi) at 294.3° K (70° F) or 0.1 Reid Vapor Pressure as determined by A.S.T.M. method D-323; or which when distilled requires a temperature of 300° F or greater to recover 10% of the liquid as determined by A.S.T.M. method D-86.

"Heavy Metals": For the purposes of Section 9.4 of the Act, elemental, ionic, or combined forms of arsenic, cadmium, mercury, chromium, nickel and lead.

"Heavy, Off-Highway Vehicle Products": For the purposes of Section 215.204(k), heavy off-highway vehicle products shall include: heavy construction, mining, farming or material handling equipment; heavy industrial engines; diesel-electric locomotives and associated power generation equipment; and the components of such equipment or engines.

"Hot Well": The reservoir of a condensing unit receiving the condensate from a barometric condenser.

"Housekeeping Practices": Those activities specifically defined in the list of housekeeping practices developed by the Joint EPA - Industry Task

Force and included herein under 35 Ill. Adm. Code 212.461.

"Incinerator": Combustion apparatus in which refuse is burned.

"Indirect Heat Transfer": Transfer of heat in such a way that the source of heat does not come into direct contact with process materials.

"In-Process Tank": A container used for mixing, blending, heating, reacting, holding, crystallizing, evaporating, or cleaning operations in the manufacture of pharmaceuticals.

"In-situ Sampling Systems": Nonextractive samplers or in-line samplers.

"Interior Body Spray Coat": A coating applied by spray to the interior of a can after the can body has been formed.

"Internal Transferring Area": Areas and associated equipment used for conveying grain among the various grain operations.

"Large Appliance Coating": The application of a coating material to the component metal parts (including but not limited to doors, cases, lids, panels and interior support parts) of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners and other similar products.

"Light-Duty Truck": Any second division motor vehicle, as that term is defined in the Illinois Vehicle Code, (Ill. Rev. Stat. 1987, ch. 95½, pars. 1-100 et seq.) weighing less than 3854 kilograms (8500 pounds) gross.

"Liquid-Mounted Seal": A primary seal mounted in continuous contact with the liquid between the tank wall and the floating roof edge around the circumference of the roof.

"Liquid Service": Means that the equipment or component contains process fluid that is in a liquid state at operating conditions.

"Liquids Dripping": Any visible leaking from a seal including spraying, misting, clouding and ice



formation.

"Load-Out Area": Any area where grain is transferred from the grain-handling operation to any vehicle for shipment or delivery.

"Low Solvent Coating": A coating which contains less organic solvent than the conventional coatings used by the industry. Low solvent coatings include water-borne, higher solids, electro-deposition and powder coatings.

"Magnet Wire Coating": The application of a coating of electrically insulating varnish or enamel to conducting wire to be used in electrical machinery.

"Major Dump Pit": Any dump pit with an annual grain through-put of more than 300,000 bushels, or which receives more than 40% of the annual grain through-put of the grain-handling operation.

"Major Metropolitan Area (MMA)": Any county or group of counties which is defined by the following Table:

MAJOR METROPOLITAN AREAS IN ILLINOIS  
(MMA's)

MMA	COUNTIES INCLUDED IN MMA
Champaign-Urbana	Champaign
Chicago	Cook, Lake, Will, DuPage, McHenry, Kane, Grundy, Kendall, Kankakee
Decatur	Macon
Peoria	Peoria, Tazewell
Rockford	Winnebago
Rock Island -- Moline	Rock Island
Springfield	Sangamon
St. Louis (Illinois)	St. Clair, Madison
Bloomington -- Normal	McLean

"Major Population Area (MPA)": Areas of major

population concentration in Illinois, as described below:

The area within the counties of Cook; Lake; DuPage; Will; the townships of Burton, Richmond, McHenry, Greenwood, Nunda, Door, Algonquin, Grafton and the municipality of Woodstock, plus a zone extending two miles beyond the boundary of said municipality located in McHenry County; the townships of Dundee, Rutland, Elgin, Plato, St. Charles, Campton, Geneva, Blackberry, Batavia, Sugar Creek and Aurora located in Kane County; and the municipalities of Kankakee, Bradley and Bourbonnais, plus a zone extending two miles beyond the boundaries of said municipalities in Kankakee County.

The area within the municipalities of Rockford and Loves Park, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Rock Island, Moline, East Moline, Carbon Cliff, Milan, Oak Grove, Silvis, Hampton, Greenwood and Coal Valley, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Galesburg and East Galesburg, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Bartonville, Peoria and Peoria Heights, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Pekin, North Pekin, Marquette Heights, Creve Coeur and East Peoria, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Bloomington and Normal, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Champaign, Urbana and Savoy, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Decatur, Mt. Zion, Harristown and Forsyth, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Springfield, Leland Grove, Jerome, Southern View, Grandview, Sherman and Chatham, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the townships of Godfrey, Foster, Wood River, Fort Russell, Chouteau, Edwardsville, Venice, Nameoki, Alton, Granite City and Collinsville located in Madison County; and the townships of Stites, Canteen, Centreville, Caseyville, St. Clair, Sugar Loaf and Stookey located in St. Clair County.

"Manufacturing Process": A process emission source or series of process emission sources used to convert raw materials, feed stocks, subassemblies or other components into a product, either for sale or for use as a component in a subsequent manufacturing process.

"Metal Furniture Coating": The application of a coating material to any furniture piece made of metal or any metal part which is or will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece including, but not limited to, tables, chairs, wastebaskets, beds, desks, lockers, benches, shelving, file cabinets, lamps and room dividers. This definition shall not apply to any coating line coating metal parts or products that is identified under the Standard Industrial Classification Code for Major Groups 33, 34, 35, 36, 37, 38, 39, 40 or 41.

"Miscellaneous Fabricated Product Manufacturing Process":

A manufacturing process involving one or more of the following applications, including any drying and curing of

formulations, and capable of emitting volatile organic material:

Adhesives to fabricate or assemble non-furniture components or products

Asphalt solutions to paper or fiberboard

Asphalt to paper or felt

Coatings or dye to leather

Coatings to plastic

Coatings to rubber or glass

Curing of furniture adhesives in an oven which would emit in excess of 10 tons of volatile organic material per year if no air pollution control equipment were used

Disinfectant material to manufactured items

Plastic foam scrap or "fluff" from the manufacture of foam containers and packaging material to form resin pellets

Resin solutions to fiber substances

Rubber solutions to molds

Viscose solutions for food casings

The storage and handling of formulations associated with the process described above.

The use and handling of organic liquids and other substances for clean-up operations associated with the process described above.

**"Miscellaneous Formulation Manufacturing Process":**

A manufacturing process which compounds one or more of the following and is capable of emitting volatile organic material:

Adhesives

Asphalt solutions

Caulks, sealants or waterproofing agents

Coatings, other than paint and ink

Concrete curing compounds

Dyes

Friction materials and compounds

Resin solutions

Rubber solutions

Viscose solutions

The storage and handling of formulations associated with the process described above.

The use and handling of organic liquids and other substances for clean-up operations associated with the process described above.

"Miscellaneous Metal Parts and Products": For the purpose of 35 Ill. Adm. Code 215.204, miscellaneous metal parts and products shall include farm machinery, garden machinery, small appliances, commercial machinery, industrial machinery, fabricated metal products and any other industrial category which coats metal parts or products under the Standard Industrial Classification Code for Major Groups 33, 34, 35, 36, 37, 38 or 39 with the exception of the following: coating lines subject to 35 Ill. Adm. Code 215.204(a)-(i) and (k), automobile or light-duty truck refinishing, the exterior of marine vessels and the customized top coating of automobiles and trucks if production is less than thirty-five vehicles per day.

"Miscellaneous Organic Chemical Manufacturing Process":

A manufacturing process which produces by chemical reaction, one or more of the following organic compounds or mixtures of organic compounds and which is capable of emitting volatile organic materials:

Chemicals listed in 35 Ill. Adm. Code  
215. Appendix D.

Chlorinated and sulfonated compounds

Cosmetic, detergent, soap or  
surfactant intermediaries or  
specialties and products

Disinfectants

Food additives

Oil and petroleum product additives

Plasticizers

Resins or polymers

Rubber additives

Sweeteners

Varnishes

The storage and handling of formulations  
associated with the process described  
above.

The use and handling of organic liquids  
and other substances for clean-up  
operations associated with the process  
described above.

"Mixing Operation": The operation of combining two  
or more ingredients, of which at least one is a  
grain.

"New Grain-Drying Operation": Any grain-drying  
operation the construction or modification of which  
is commenced on or after June 30, 1975.

"New Grain-Handling Operation": Any grain-handling  
operation the construction or modification of which  
is commenced on or after June 30, 1975.

"No Detectable Volatile Organic Material Emissions":  
A discharge of volatile organic material into the  
atmosphere as indicated by an instrument reading of  
less than 500 ppm above background as determined in  
accordance with 40 CFR 60.485(c).

"One Hundred Percent Acid": Acid with a specific gravity of 1.8205 at 30° C in the case of sulfuric acid and 1.4952 at 30° C in the case of nitric acid.

"One-Turn Storage Space": That space used to store grain with a total annual through-put not in excess of the total bushel storage of that space.

"Opacity": A condition which renders material partially or wholly impervious to transmittance of light and causes obstruction of an observer's view. For the purposes of these regulations, the following equivalence between opacity and Ringelmann shall be employed:

Opacity Percent	Ringelmann
10	0.5
20	1.
30	1.5
40	2.
60	3.
80	4.
100	5.

"Open Top Vapor Degreasing": The batch process of cleaning and removing soils from surfaces by condensing hot solvent vapor on the colder metal parts.

"Operator of Gasoline Dispensing Facility": Any person who is the lessee of or operates, controls or supervises a gasoline dispensing facility.

"Organic Compound": Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metal carbides or carbonates, and ammonium carbonate.

"Organic Material": Any chemical compound of carbon including diluents and thinners which are liquids at standard conditions and which are used as solvers, viscosity reducers or cleaning agents, but excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbonic acid, metallic carbide, metallic carbonates and ammonium carbonate.

"Organic Materials": For the purposes of Section 9.4 of the Act, any chemical compound of, carbon including diluents and thinners which are liquids at standard conditions and which are used as

dissolvers, viscosity reducers or cleaning agents, and polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans and polynuclear aromatic hydrocarbons are organic materials, while methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbonic acid, metallic carbide, metallic carbonates and ammonium carbonate are organic materials.

"Organic Vapor": Gaseous phase of an organic material or a mixture of organic materials present in the atmosphere.

"Overvarnish": A coating applied directly over ink or printing.

"Owner of Gasoline Dispensing Facility": Any person who has legal or equitable title to a stationary storage tank at a gasoline dispensing facility.

"Packaging Rotogravure Printing": Rotogravure printing upon paper, paper board, metal foil, plastic film and other substrates, which are, in subsequent operations, formed into packaging products or labels for articles to be sold.

"Paint Manufacturing Plant": A plant that mixes, blends, or compounds enamels, lacquers, sealers, shellacs, stains, varnishes or pigmented surface coatings.

"Paper Coating": The application of a coating material to paper or pressure sensitive tapes, regardless of substrate, including web coating on plastic fibers and decorative coatings on metal foil.

"Particulate Matter": Any solid or liquid material, other than water, which exists in finely divided form.

"Petroleum Liquid": Crude oil, condensate or any finished or intermediate product manufactured at a petroleum refinery, but not including Number 2 through Number 6 fuel oils as specified in A.S.T.M. D-396-69, gas turbine fuel oils Numbers 2-GT through 4-GT as specified in A.S.T.M. D-2880-71 or diesel fuel oils Numbers 2-D and 4-D, as specified in A.S.T.M. D-975-68.

"Petroleum Refinery": Any facility engaged in producing gasoline, kerosene, distillate fuel oils,



residual fuel oils, lubricants, or other products through distillation, cracking, extraction or reforming of unfinished petroleum derivatives.

"Pharmaceutical": Any compound or mixture, other than food, used in the prevention, diagnosis, alleviation, treatment or cure of disease in man and animal.

"Pharmaceutical Coating Operation": a device in which a coating is applied to a pharmaceutical, including any drying or curing of the coating.

"Photochemically Reactive Material": Any organic material with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below or the composition of which exceeds any of the following individual percentage composition limitations. Whenever any photochemically reactive material or any constituent of any organic material may be classified from its chemical structure into more than one of the above groups of organic materials it shall be considered as a member of the most reactive group, that is, the group having the least allowable percent of the total organic materials.

A combination of hydrocarbons, alcohols, aldehydes, esters, ethers or ketones having an olefinic or cyclo-olefinic types of unsaturation: 5 percent. This definition does not apply to perchlorethylene or trichloroethylene.

A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethyl-benzene: 8 percent.

A combination of ethylbenzene, ketones having branched hydrocarbon structures or toluene: 20 percent.

"Plant": all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control), except the activities of any marine vessel. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same major group (i.e., which have the same two-digit code) as described in the "Standard Industrial

Classification Manual", 1987.

"Pneumatic Rubber Tire Manufacture": The production of pneumatic rubber tires with a bead diameter up to but not including 20.0 inches and cross section dimension up to 12.8 inches, but not including specialty tires for antique or other vehicles when produced on equipment separate from normal production lines for passenger or truck type tires.

"Polybasic Organic Acid Partial Oxidation Manufacturing Process": Any process involving partial oxidation of hydrocarbons with air to manufacture polybasic acids or their anhydrides, such as maleic anhydride, phthalic anhydride, terephthalic acid, isophthalic acid, trimellitic anhydride.

"Portable Grain-Handling Equipment": Any equipment (excluding portable grain dryers) that is designed and maintained to be movable primarily for use in a non-continuous operation for loading and unloading one-turn storage space, and is not physically connected to the grain elevator, provided that the manufacturer's rated capacity of the equipment does not exceed 10,000 bushels per hour.

"Portland Cement Process": Any facility manufacturing portland cement by either the wet or dry process.

"Power Driven Fastener Coating": The coating of nail, staple, brad and finish nail fasteners where such fasteners are fabricated from wire or rod of 0.0254 inch diameter or greater, where such fasteners are bonded into coils or strips, such coils and strips containing a number of such fasteners, which fasteners are manufactured for use in power tools, and which fasteners must conform with formal standards for specific uses established by various federal and national organizations including Federal Specification FF-N-105b of the General Services Administration dated August 23, 1977 (does not include any later amendments or editions; U.S. Army Armament Research and Development Command, Attn: DRDAR-TST, Rock Island, IL 61201), Bulletin UM-25d of the U.S. Department of Housing and Urban Development - Federal Housing Administration dated September 5, 1973 (does not include any later amendments or editions; Department of HUD, 547 W. Jackson Blvd., Room 1005, Chicago, IL 60606), and the Model Building Code of the

Council of American Building Officials, and similar standards. For the purposes of this definition, the terms "brad" and "finish nail" refer to single leg fasteners fabricated in the same manner as staples. The application of coatings to staple, brad, and finish nail fasteners may be associated with the incremental forming of such fasteners in a cyclic or repetitious manner (incremental fabrication) or with the forming of strips of such fasteners as a unit from a band of wires (unit fabrication).

"PPM (Vol) - (Parts per Million) (Volume)": A volume/volume ratio which expresses the volumetric concentration of gaseous air contaminant in a million unit volumes of gas.

"Pressure Release": The emission of materials resulting from system pressure being greater than set pressure of the pressure relief device.

"Pressure Tank": A tank in which fluids are stored at a pressure greater than atmospheric pressure.

"Prime Coat": The first film of coating material applied in a multiple coat operation.

"Prime Surfacer Coat": A film of coating material that touches up areas on the surface not adequately covered by the prime coat before application of the top coat.

"Process": Any stationary emission source other than a fuel combustion emission source or an incinerator.

"Process Unit": Components assembled to produce, as intermediate or final products, one or more of the chemicals listed in 35 Ill. Adm. Code 215. Appendix D. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

"Process Unit Shutdown": A work practice or operational procedure that stops production from a process unit or part of a process unit. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours is not a process unit shutdown. The use of spare components and technically feasible bypassing of components without stopping production is not a process unit

shutdown.

"Process Weight Rate": The actual weight or engineering approximation thereof of all materials except liquid and gaseous fuels and combustion air, introduced into any process per hour. For a cyclical or batch operation, the process weight rate shall be determined by dividing such actual weight or engineering approximation thereof by the number of hours of operation excluding any time during which the equipment is idle. For continuous processes, the process weight rate shall be determined by dividing such actual weight or engineering approximation thereof by the number of hours in one complete operation, excluding any time during which the equipment is idle.

"Production Equipment Exhaust System": A system for collecting and directing into the atmosphere emissions of volatile organic material from reactors, centrifuges and other process emission sources.

"Publication Rotogravure Printing": Rotogravure printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements or other types of non-packaging printed materials.

"Purged Process Fluid": Liquid or vapor from a process unit that contains volatile organic material and that results from flushing or cleaning the sample line(s) of a process unit so that an uncontaminated sample may then be taken for testing or analysis.

"Reactor": A vat, vessel or other device in which chemical reactions take place.

"Reasonably Available Control Technology (RACT)": The lowest emission limitation that an emission source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.

"Refinery Fuel Gas": Any gas which is generated by a petroleum refinery process unit and which is combusted at the refinery, including any gaseous mixture of natural gas and fuel gas.

"Refinery Unit, Process Unit or Unit": A set of components which are a part of a basic process

operation such as distillation, hydrotreating, cracking or reforming of hydrocarbons.

"Refrigerated Condenser": a surface condenser in which the coolant supplied to the condenser has been cooled by a mechanical device, other than by a cooling tower or evaporative spray cooling, such as a refrigeration unit or steam chiller unit.

"Residual Fuel Oil": Fuel oils of grade No. 4, 5 and 6 as specified in detailed requirements for fuel oils A.S.T.M. D-396-69 (1971).

"Restricted Area": The area within the boundaries of any "municipality" as defined in the Illinois Municipal Code, plus a zone extending one mile beyond the boundaries of any such municipality having a population of 1000 or more according to the latest federal census.

"Ringelmann Chart": The chart published and described in the Bureau of Mines, U.S. Department of Interior, Information Circular 8333 (Revision of IC7718) May 1, 1967, or any adaptation thereof which has been approved by the Agency.

"Roadway": Any street, highway, road, alley, sidewalk, parking lot, airport, rail bed or terminal, bikeway, pedestrian mall or other structure used for transportation purposes.

"Roll Printing": The application of words, designs and pictures to a substrate usually by means of a series of hard rubber or metal rolls each with only partial coverage.

"Rotogravure Printing": The application of words, designs and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is recessed relative to the non-image area.

"Safety Relief Valve": A valve which is normally closed and which is designed to open in order to relieve excessive pressures within a vessel or pipe.

"Sandblasting": The use of a mixture of sand and air at high pressures for cleaning and/or polishing any type of surface.

"Sensor": A device that measures a physical quantity or the change in a physical quantity such as temperature, pressure, flow rate, pH, or liquid

level.

"Set of Safety Relief Valves": One or more safety relief valves designed to open in order to relieve excessive pressures in the same vessel or pipe.

"Sheet Basecoat": A coating applied to metal when the metal is in sheet form to serve as either the exterior or interior of a can for either two-piece or three-piece cans.

"Shotblasting": The use of a mixture of any metallic or non-metallic substance and air at high pressures for cleaning and/or polishing any type of surface.

"Side-Seam Spray Coat": A coating applied to the seam of a three-piece can.

"Smoke": Small gas-borne particles resulting from incomplete combustion, consisting predominately but not exclusively of carbon, ash and other combustible material, that form a visible plume in the air.

"Smokeless Flare": A combustion unit and the stack to which it is affixed in which organic material achieves combustion by burning in the atmosphere such that the smoke or other particulate matter emitted to the atmosphere from such combustion does not have an appearance density or shade darker than No. 1 of the Ringelmann Chart.

"Solvent Cleaning": The process of cleaning soils from surfaces by cold cleaning, open top vapor degreasing or conveyorized degreasing.

"Specialty High Gloss Catalyzed Coating": Commercial contract finishing of material prepared for printers and lithographers where the finishing process uses a solvent-borne coating, formulated with a catalyst, in a quantity of no more than 12,000 gallons/year as supplied, where the coating machines are sheet fed and the coated sheets are brought to a minimum surface temperature of 190° F, and where the coated sheets are to achieve the minimum specular reflectance index of 65 measured at a 60 degree angle with a gloss meter.

"Splash Loading": A method of loading a tank, railroad tank car, tank truck or trailer by use of other than a submerged loading pipe.

"Stack": A flue or conduit, free-standing or with exhaust port above the roof of the building on which it is mounted, by which air contaminants are emitted into the atmosphere.

"Standard Conditions": A temperature of 70° F and a pressure of 14.7 pounds per square inch absolute (psia).

"Standard Cubic Foot (scf)": The volume of one cubic foot of gas at standard conditions.

"Startup": The setting in operation of an emission source for any purpose.

"Stationary Emission Source": An emission source which is not self-propelled.

"Stationary Storage Tank": Any container of liquid or gas which is designed and constructed to remain at one site.

"Submerged Loading Pipe": Any loading pipe the discharge opening of which is entirely submerged when the liquid level is 6 inches above the bottom of the tank. When applied to a tank which is loaded from the side, any loading pipe the discharge of which is entirely submerged when the liquid level is 18 inches or two times the loading pipe diameter, whichever is greater, above the bottom of the tank. The definition shall also apply to any loading pipe which is continuously submerged during loading operations.

"Sulfuric Acid Mist": Sulfuric acid mist as measured according to the method specified in 35 Ill. Adm. Code 214.101(b).

"Surface Condenser": A device which removes a substance from a gas stream by reducing the temperature of the stream, without direct contact between the coolant and the stream.

"Synthetic Organic Chemical or Polymer Manufacturing Plant": A plant that produces, as intermediates or final products, one or more of the chemicals or polymers listed in 35 Ill. Adm. Code 215. Appendix D.

"Tablet coating operation": a pharmaceutical coating operation in which tablets are coated.

"Top Coat": A film of coating material applied in a multiple coat operation other than the prime coat, final repair coat or prime surfacer coat.

"Transfer Efficiency": ratio of the amount of coating solids deposited onto a part or product to the total amount of coating solids used.

"Tread End Cementing": The application of a solvent-based cement to the tire tread ends.

"True Vapor Pressure": The equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in American Petroleum Institute Bulletin 2517, "Evaporation Loss From Floating Roof Tanks" (1962).

"Turnaround": The procedure of shutting down an operating refinery unit, emptying gaseous and liquid contents to do inspection, maintenance and repair work, and putting the unit back into production.

"Undertread Cementing": The application of a solvent-based cement to the underside of a tire tread.

"Unregulated Safety Relief Valve": A safety relief valve which cannot be actuated by a means other than high pressure in the pipe or vessel which it protects.

"Vacuum Producing System": Any reciprocating, rotary or centrifugal blower or compressor, or any jet ejector or device that creates suction from a pressure below atmospheric and discharges against a greater pressure.

"Valves Not Externally Regulated": Valves that have no external controls, such as in-line check valves.

"Vapor Balance System": Any combination of pipes or hoses which creates a closed system between the vapor spaces of an unloading tank and a receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded.

"Vapor Collection System": All piping, seals, hoses, connections, pressure-vacuum vents, and other possible sources between the gasoline delivery vessel and the vapor processing unit and/or the storage tanks and vapor holder.



"Vapor Control System": Any system that prevents release to the atmosphere of organic material in the vapors displaced from a tank during the transfer of gasoline.

"Vapor-Mounted Primary Seal": A primary seal mounted with an air space bounded by the bottom of the primary seal, the tank wall, the liquid surface and the floating roof.

"Vinyl Coating": The application of a topcoat or printing to vinyl coated fabric or vinyl sheets.

"Volatile Organic Liquid": Any liquid which contains volatile organic material.

"Volatile Organic Material":

Any organic material compound which participates in atmospheric photochemical reactions unless specifically exempted from this definition. For purposes of determining compliance with emission limits, Volatile organic material emissions shall be measured by the reference test methods specified under 40 CFR 60, Appendix A (1986) (no future amendments or editions are included), or, if no reference method is applicable, may be determined by mass balance calculations, incorporated by reference in 35 Ill. Adm. Code 215.105. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds.

For purposes of this definition, the following organic compounds have been determined to have negligible photochemical reactivity and are not volatile organic materials:

Chlorodifluoroethane (HCFC-142b)  
Chlorodifluoromethane (CFC-22)  
Chloropentafluoroethane (CFC-115)  
Dichlorodifluoromethane (CFC-12)  
Dichlorofluoroethane (HCFC-141b)  
Dichlorotetrafluoroethane (CFC-114)  
Dichlorotrifluoroethane (HCFC-123)  
Ethane

Methane  
 Dichloromethane (Methylene chloride)  
 Tetrafluoroethane (HFC-134a)  
 1,1,1, Trichloroethane (Methyl  
 chloroform)  
 Trichlorofluoromethane (CFC-11)  
 Trichlorotrifluoroethane (CFC-113)  
 Trifluoromethane (FC-23)

Volatile Organic Material Content" or "VOMC": the emissions of volatile organic material which would result from the exposure of a coating, printing ink, fountain solution, tire spray, dry cleaning waste or other similar material to the air, including any drying or curing, in the absence of any control equipment. VOMC is typically expressed as kilogram (kg) VOM/liter (lb VOM/gallon) of coating or coating solids, or kg VOM/kg (lb VOM/lb) of coating solids, of coating material or material.

"Volatile Petroleum Liquid": Any petroleum liquid with a true vapor pressure that is greater than 1.5 psia (78 millimeters of mercury) at standard conditions.

"Wastewater (Oil/Water) Separator": Any device or piece of equipment which utilizes the difference in density between oil and water to remove oil and associated chemicals of water, or any device, such as a flocculation tank or a clarifier, which removes petroleum derived compounds from waste water.

"Weak Nitric Acid Manufacturing Process": Any acid producing facility manufacturing nitric acid with a concentration of less than 70 percent by weight.

"Woodworking": The shaping, sawing, grinding, smoothing, polishing and making into products of any form or shape of wood.

(Source: Amended at 15 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 215  
 ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS

## SUBPART A: GENERAL PROVISIONS

Section	
215.100	Introduction
215.101	Clean-up and Disposal Operations
215.102	Testing Methods
215.103	Abbreviations and Conversion Factors
215.104	Definitions
215.105	Incorporation by Reference
215.106	Afterburners
215.107	Determination of Applicability

## SUBPART B: ORGANIC EMISSIONS FROM STORAGE AND LOADING OPERATIONS

Section	
215.121	Storage Containers
215.122	Loading Operations
215.123	Petroleum Liquid Storage Tanks
215.124	External Floating Roofs
215.125	Compliance Dates and Geographical Areas
215.126	Compliance Plan
215.127	Emissions Testing
215.128	Measurement of Seal Gaps

## SUBPART C: ORGANIC EMISSIONS FROM MISCELLANEOUS EQUIPMENT

Section	
215.141	Separation Operations
215.142	Pumps and Compressors
215.143	Vapor Blowdown
215.144	Safety Relief Valves

## SUBPART E: SOLVENT CLEANING

Section	
215.181	Solvent Cleaning in General
215.182	Cold Cleaning
215.183	Open Top Vapor Degreasing
215.184	Conveyorized Degreasing
215.185	Compliance Plan

## SUBPART F: COATING OPERATIONS

Section	
215.202	Compliance Schedules
215.204	Emission Limitations for Manufacturing Plants
215.205	Alternative Emission Limitations
215.206	Exemptions from Emission Limitations
215.207	Compliance by Aggregation of Emission Sources
215.208	Testing Methods for Volatile Organic Material Content
215.209	Exemption from General Rule on Use of Organic Material
215.210	Alternative Compliance Schedule
215.211	Compliance Dates and Geographical Areas
215.212	Compliance Plan

215.213 Special Requirements for Compliance Plan  
 215.214 Roadmaster Emissions Limitations

SUBPART H: SPECIAL LIMITATIONS FOR SOURCES IN MAJOR URBANIZED  
 AREAS WHICH ARE NONATTAINMENT FOR OZONE

Section  
 215.240 Applicability  
 215.241 External Floating Roofs  
 215.245 Flexographic and Rotogravure Printing  
 215.249 Compliance Dates

SUBPART I: ADJUSTED RACT EMISSIONS LIMITATIONS

Section  
 215.260 Applicability  
 215.261 Petition  
 215.263 Public Hearing  
 215.264 Board Action  
 215.267 Agency Petition

SUBPART K: USE OF ORGANIC MATERIAL

Section  
 215.301 Use of Organic Material  
 215.302 Alternative Standard  
 215.303 Fuel Combustion Emission Sources  
 215.304 Operations with Compliance Program  
 215.305 Viscose Exemption (Repealed)

SUBPART N: VEGETABLE OIL PROCESSING

Section  
 215.340 Hexane Extraction Soybean Crushing  
 215.342 Hexane Extraction Corn Oil Processing  
 215.344 Recordkeeping For Vegetable Oil Processes  
 215.345 Compliance Determination  
 215.346 Compliance Dates and Geographical Areas  
 215.347 Compliance Plan

SUBPART P: PRINTING AND PUBLISHING

Section  
 215.401 Flexographic and Rotogravure Printing  
 215.402 Exemptions  
 215.403 Applicability of Subpart K  
 215.404 Testing and Monitoring (Repealed)  
 215.405 Compliance Dates and Geographical Areas  
 215.406 Alternative Compliance Plan  
 215.407 Compliance Plan  
 215.408 Heatset Web Offset Lithographic Printing  
 215.409 Testing Methods for Volatile Organic Material  
 Content  
 215.410 Emissions Testing

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

Section	
215.420	Applicability
215.421	General Requirements
215.422	Inspection Program Plan for Leaks
215.423	Inspection Program for Leaks
215.424	Repairing Leaks
215.425	Recordkeeping for Leaks
215.426	Reporting for Leaks
215.427	Alternative Program for Leaks
215.428	Compliance Dates
215.429	Compliance Plan
215.430	General Requirements
215.431	Inspection Program Plan for Leaks
215.432	Inspection Program for Leaks
215.433	Repairing Leaks
215.434	Recordkeeping for Leaks
215.435	Report for Leaks
215.436	Alternative Program for Leaks
215.437	Open-Ended Valves
215.438	Standards for Control Devices
215.439	Compliance Date

SUBPART R: PETROLEUM REFINING AND RELATED INDUSTRIES; ASPHALT  
MATERIALS

Section	
215.441	Petroleum Refinery Waste Gas Disposal
215.442	Vacuum Producing Systems
215.443	Wastewater (Oil/Water) Separator
215.444	Process Unit Turnarounds
215.445	Leaks: General Requirements
215.446	Monitoring Program Plan for Leaks
215.447	Monitoring Program for Leaks
215.448	Recordkeeping for Leaks
215.449	Reporting for Leaks
215.450	Alternative Program for Leaks
215.451	Sealing Device Requirements
215.452	Compliance Schedule for Leaks
215.453	Compliance Dates and Geographical Areas

SUBPART S: RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS

Section	
215.461	Manufacture of Pneumatic Rubber Tires
215.462	Green Tire Spraying Operations
215.463	Alternative Emission Reduction Systems
215.464	Emission Testing and Monitoring
215.465	Compliance Dates and Geographical Areas
215.466	Compliance Plan
215.467	Testing Methods for Volatile Organic Material
Content	

SUBPART T: PHARMACEUTICAL MANUFACTURING

Section

215.480	Applicability of Subpart T
215.481	Control of Reactors, Distillation Units, Crystallizers, Centrifuges and Vacuum Dryers
215.482	Control of Air Dryers, Production Equipment Exhaust Systems and Filters
215.483	Material Storage and Transfer
215.484	In-Process Tanks
215.485	Leaks
215.486	Other Emission Sources
215.487	Testing
215.488	Monitors for Air Pollution Control Equipment
215.489	<del>Compliance Schedule</del> <u>Recordkeeping</u>
215.490	<u>Compliance Schedule</u>

SUBPART U: COKE MANUFACTURING AND BY-PRODUCT RECOVERY

Section	
215.500	Exceptions
215.510	Coke By-Product Recovery Plants
215.512	Coke By-Product Recovery Plant Leaks
215.513	Inspection Program
215.514	Recordkeeping Requirements
215.515	Reporting Requirements
215.516	Compliance Dates
215.517	Compliance Plan

SUBPART V: AIR OXIDATION PROCESSES

Section	
215.520	Applicability
215.521	Definitions
215.525	Emission Limitations for Air Oxidation Processes
215.526	Testing and Monitoring
215.527	Compliance Date

SUBPART W: AGRICULTURE

Section	
215.541	Pesticide Exception

SUBPART X: CONSTRUCTION

Section	
215.561	Architectural Coatings
215.562	Paving Operations
215.563	Cutback Asphalt

SUBPART Y: GASOLINE DISTRIBUTION

Section	
215.581	Bulk Gasoline Plants
215.582	Bulk Gasoline Terminals
215.583	Gasoline Dispensing Facilities
215.584	Gasoline Delivery Vessels
215.585	Gasoline Volatility Standards
215.586	Emissions Testing

## SUBPART Z: DRY CLEANERS

Section	
215.601	Perchloroethylene Dry Cleaners
215.602	Exemptions
215.603	Leaks
215.604	Compliance Dates and Geographical Areas
215.605	Compliance Plan
215.606	Exception to Compliance Plan
215.607	Standards for Petroleum Solvent Dry Cleaners
215.608	Operating Practices for Petroleum Solvent Dry Cleaners
215.609	Program for Inspection and Repair of Leaks
215.610	Testing and Monitoring
215.611	Exemption for Petroleum Solvent Dry Cleaners
215.612	Compliance Dates and Geographical Areas
215.613	Compliance Plan
215.614	Testing Method for Volatile Organic Material Content of Wastes
215.615	Emissions Testing

## SUBPART AA: PAINT AND INK MANUFACTURING

Section	
215.620	Applicability
215.621	Exemption for Waterbase Material and Heatset Offset Ink
215.623	Permit Conditions
215.624	Open-top Mills, Tanks, Vats or Vessels
215.625	Grinding Mills
215.628	Leaks
215.630	Clean Up
215.636	Compliance Date

## SUBPART BB: POLYSTYRENE PLANTS

Section	
215.875	Applicability of Subpart BB
215.877	Emissions Limitation at Polystyrene Plants
215.879	Compliance Date
215.881	Compliance Plan
215.883	Special Requirements for Compliance Plan
215.886	Emission Testing

## SUBPART PP: MISCELLANEOUS FABRICATED PRODUCT MANUFACTURING PROCESSES

Section	
215.920	Applicability
215.923	Permit Conditions
215.926	Control Requirements

## SUBPART QQ: MISCELLANEOUS FORMULATION MANUFACTURING PROCESSES

Section	
215.940	Applicability
215.943	Permit Conditions

## 215.946 Control Requirements

SUBPART RR: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING  
PROCESSES

Section	
215.960	Applicability
215.963	Permit Conditions
215.966	Control Requirements
Appendix A	Rule Into Section Table
Appendix B	Section Into Rule Table
Appendix C	Past Compliance Dates
Appendix D	List of Chemicals Defining Synthetic Organic Chemical and Polymer Manufacturing
Appendix E	Reference Methods and Procedures
Appendix F	Coefficients for the Total Resource Effectiveness Index (TRE) Equation

AUTHORITY: Implementing Section 22 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1989, ch. 111-1/2, pars. 1022 and 1027).

SOURCE: Adopted as Chapter 2: Air Pollution, Rule 205: Organic Material Emission Standards and Limitations, R71-23, 4 PCB 191, filed and effective April 14, 1972; amended in R77-3, 33 PCB 357, at 3 Ill. Reg. 18, p. 41, effective May 3, 1979; amended in R78-3 and R78-4, 35 PCB 75, 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. 13601; Notice of Corrections at 7 Ill. Reg. 14575; amended in R82-14 at 8 Ill. Reg. 13254, effective July 12, 1984; amended in R83-36 at 9 Ill. Reg. 9114, effective May 30, 1985; amended in R82-14 at 9 Ill. Reg. 13960, effective August 28, 1985; amended in R85-28 at 11 Ill. Reg. 3127, effective February 3, 1987; amended in R82-14 at 11 Ill. Reg. 7296, effective April 3, 1987; amended in R85-21(A) at 11 Ill. Reg. 11770, effective June 29, 1987; recodified in R86-39 at 11 Ill. Reg. 13541; amended in R82-14 and R86-12 at 11 Ill. Reg. 16706, effective September 30, 1987; amended in R85-21(B) at 11 Ill. Reg. 19117, effective November 9, 1987; amended in R86-36, R86-39, R86-40 at 11 Ill. Reg. 20829, effective December 14, 1987; amended in R82-14 and R86-37 at 12 Ill. Reg. 815, effective December 24, 1987; amended in R86-18 at 12 Ill. Reg. 7311, effective April 8, 1988; amended in R86-10 at 12 Ill. Reg. 7650, effective April 11, 1988; amended in R88-23 at 13 Ill. Reg. 10893, effective June 27, 1989.; amended in R88-30(A) at 14 Ill. Reg. 3555, effective February 27, 1990; amended in R88-19 at 14 Ill. Reg. 7596, effective May 8, 1990; amended in R89-16(A) at 14 Ill. Reg. 9173, effective May 23, 1990; amended in R88-30(B) at 15 Ill. Reg. 3309, effective February 13, 1991; amended in R88-14 at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.



## SUBPART A: GENERAL PROVISIONS

## Section 215.102 Testing Methods

- a) The total organic material concentrations in an effluent stream shall be measured by a flame ionization detector, or by other methods approved by the Illinois Environmental Protection Agency (Agency), according to the provisions of 35 Ill. Adm. Code 201.
- b) ~~Measurement of Vapor Pressures~~
- 1) ~~For a single component, the actual vapor pressure shall be determined by ASTM (American Society of Testing and Materials) Method D-2879-83 (Approved 1983), incorporated by reference in Section 215.105, or the vapor pressure may be obtained from a published source such as Boublik, T., v. Fried and E. Hala, "The Vapor Pressure of Pure Substances," Elsevier Scientific Publishing Co., New York (1973), Perry's Chemical Engineer's Handbook, McGraw-Hill Book Company (1984), CRC Handbook of Chemistry and Physics, Chemical Rubber Publishing Company (1968-87), Lange's Handbook of Chemistry, John A. Dean, editor, McGraw-Hill Book Company (1985).~~
- 2) ~~For a mixture, the actual vapor pressure shall be determined by ASTM (American Society of Testing and Materials) Method D-2879-83 (Approved 1983), incorporated by reference in Section 215.105, or the vapor pressure may be taken as either:~~
- A) ~~If the vapor pressure of the volatile organic liquid is specified in the applicable rule, the lesser of the sum of the actual vapor pressure of each component or each volatile organic material component, as determined above weighted by its mole fraction; or~~
- B) ~~If the vapor pressure of the organic material or volatile organic material is specified in the applicable rule, the sum of the actual vapor pressure of each such component as determined~~

~~above weighted by its mole fraction.~~

(Source: Amended at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 215.105 Incorporation by Reference

The following materials are incorporated by reference:

- a) American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103:
- 1) ASTM D 1644-59 Method A
  - 2) ASTM D 1475-60
  - 3) ASTM D 2369-73
  - 4) ASTM D 2879-83 (Approved 1983); ASTM D 2879-86 (Approved 1986)
  - 5) ASTM D 323-82 (Approved 1982)
  - 6) ASTM D 86-82 (Approved 1982)
  - 7) ASTM E 260-73 (Approved 1973), E 168-67 (Reapproved 1977), E 169-63 (Reapproved 1981), E 20 (Approved 1985)
  - 8) ASTM D 97-66
  - 9) ASTM D 1946-67
  - 10) ASTM D 2382-76
  - 11) ASTM D 2504-83
  - 12) ASTM D 2382-83
  - 13) ASTM D 4057-81 (Approved 1981)
  - 14) ASTM D 4177-82 (Approved 1982)
  - 15) ASTM D 4953-89
- b) Federal Standard 141a, Method 4082.1.
- c) National Fire Codes, National Fire Prevention Association, Battery March Park, Quincy, Massachusetts 02269 (1979).
- d) United States Environmental Protection Agency, Washington, D.C., EPA-450/2-77-026, Appendix A

(October 1977).

- e) United States Environmental Protection Agency, Washington, D.C., EPA-450/2-78-051 Appendix A and Appendix B (December 1978).
- f) Standard Industrial Classification Manual, published by Executive Office of the President, Office of Management and Budget, Washington, D.C., 1972
- g) 40 CFR 60, Appendix A (1986).
- h) United States Environmental Protection Agency, Washington D.C., EPA-450/2-78-041.
- i) 40 CFR 80, Appendices D, E, and F, ~~adopted March 22, (1989) at 54 Fed. Reg. 11897.~~
- j) Elsevier Scientific Publishing Co., New York, "The Vapor Pressure of Pure Substances" (1973), Boublik, T., V. Fried and E. Hala.
- k) McGraw-Hill Book Company, "Perry's Chemical Engineer's Handbook" (1984).
- l) Chemical Rubber Publishing Company, "CRC Handbook of Chemistry and Physics" (1968-87).
- m) McGraw-Hill Book Company, "Lange's Handbook of Chemistry" (1985) John A. Dean, editor.
- n) United States Environmental Protection Agency, Washington D.C., "Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products", (EPA-450/2-78-029).

BOARD NOTE: The incorporations by reference listed above contain no later amendments or editions.)

(Source: Amended at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 215.108

Measurement of Vapor Pressures

- a) Vapor Pressure of Volatile Organic Liquids
  - 1) If the volatile organic liquid consists of only a single compound, the vapor pressure shall be determined by ASTM Method D2879-86, or the vapor pressure may be obtained from a published source such as "The Vapor Pressure of Pure Substances," "Perry's Chemical Engineer's

Handbook," "CRC Handbook of Chemistry and Physics," or "Lange's Handbook of Chemistry," each source incorporated by reference at Section 215.105.

- 2) If the volatile organic liquid is a mixture, the vapor pressure shall be determined by ASTM Method D2879-86 or by the following equation:

$$P_{\text{vol}} = \sum_{i=1}^n P_i X_i$$

where:

$P_{\text{vol}}$  = Total vapor pressure of the mixture.

$n$  = Number of components in the mixture.

$i$  = Subscript denoting an individual component.

$P_i$  = Vapor pressure of a component determined in accordance with subsection (a)(1).

$X_i$  = Mole fraction of the component in the total mixture.

b) Vapor Pressure of Organic Material or Solvent

- 1) If the organic material or solvent consists of only a single compound, the vapor pressure shall be determined by ASTM Method D2879-86, or the vapor pressure may be obtained from a published source such as "The Vapor Pressure of Pure Substances," "Perry's Chemical Engineer's Handbook," "CRC Handbook of Chemistry and Physics," or "Lange's Handbook of Chemistry," each source incorporated by reference at Section 215.105.
- 2) If the organic material or solvent is a mixture made up of both organic material compounds and compounds which are not organic material, the vapor pressure shall

be determined by the following equation:

$$P_{om} = \frac{\sum_{i=1}^n P_i X_i}{\sum_{i=1}^n X_i}$$

where:

$P_{om}$  = Total vapor pressure of the portion of the mixture which is composed of organic material.

$n$  = Number of organic material components in the mixture.

$i$  = Subscript denoting an individual component.

$P_i$  = Vapor pressure of an organic material component determined in accordance with subsection (b)(1).

$X_i$  = Mole fraction of the organic material component of the total mixture.

- 3) If the organic material or solvent is a mixture made up of only organic material compounds, the vapor pressure shall be determined by ASTM Method D2879-86 or by the above equation.

c) Vapor Pressure of Volatile Organic Material

- 1) If the volatile organic material consists of only a single compound, the vapor pressure shall be determined by ASTM Method D2879-86, or the vapor pressure may be obtained from a published source such as "The Vapor Pressure of Pure Substances," "Perry's Chemical Engineer's Handbook," "CRC Handbook of Chemistry and Physics," or "Lange's Handbook of Chemistry," each source incorporated by reference at Section 215.105.

- (2) If the volatile organic material is a mixture made up of both volatile organic material compounds and compounds which are not volatile organic material, the vapor pressure shall be determined by the following equation:

$$P_{vom} = \frac{\sum_{i=1}^n P_i X_i}{\sum_{i=1}^n X_i}$$

where:

$P_{vom}$  = Total vapor pressure of the portion of the mixture which is composed of volatile organic material.

$n$  = Number of volatile organic material components in the mixture.

$i$  = Subscript denoting an individual component.

$P_i$  = Vapor pressure of a volatile organic material component determined in accordance with subsection (c) (1).

$X_i$  = Mole fraction of the volatile organic material component of the total mixture.

- 3) If the volatile organic material is a mixture made up of only volatile organic material compounds, the vapor pressure shall be determined by ASTM Method D2879-86 or by the above equation.

(Source: Added at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART T: PHARMACEUTICAL MANUFACTURING

## Section 215.480

## Applicability of Subpart T

- a) The rules of this Subpart, except for Sections 215.483 through 215.485, apply to all emission sources of volatile organic material, including but not limited to reactors, distillation units, dryers, storage tanks for volatile organic liquids, equipment for the transfer of volatile organic liquids, filters, crystallizers, washers, laboratory hoods, pharmaceutical coating operations, mixing operations and centrifuges used in manufacturing, including packaging, of pharmaceuticals, and emitting more than 6.8 kg/day (15 lbs/day) of volatile organic material and more than 2268 kg/year (2.5 tons/year) of volatile organic material, or, i. If an emission source emits less than 2,268 kg/year (2.5 tons/year) of volatile organic material, the requirements of these sections this Subpart, except for Sections 215.483 through 215.485, still apply to the emission source if volatile organic material emissions from any singlethe emission source exceed 45.4 kg/day (100 lbs/day).
- b) ~~The following emissions shall be excluded from a determination of what constitutes more than 2268 kg/year (2.5 tons/year) of volatile organic material for the purposes of subsection (a) above: not more than 4535 kg/year (5.0 tons/year) of volatile organic material from each fluid bed drier or each tunnel drier, and not more than 6803 kg/year (7.5 ton/year) of volatile organic material from each Accelacota. This subsection shall apply only to fluid bed driers, tunnel driers and Accelacotas located in Libertyville Township, Lake County, Illinois, and only when such emissions are not vented to air pollution control equipment.~~Notwithstanding subsection (a), the air suspension coater/dryer, fluid bed dryers, tunnel dryers and Accelacotas located in Libertyville Township, Lake County, Illinois shall be exempt from the rules of this Subpart, except for Sections 215.483 through 215.485, if emissions of volatile organic material not vented to air pollution control equipment do not exceed the following levels: for the air suspension coater/dryer: 2268 kg/year (2.5 tons per year); for each fluid bed dryer: 4535 kg per year (5.0 tons per year); for each tunnel dryer: 6803 kg per year (7.5 tons per year); and for each Accelacota: 6803 kg per year (7.5 tons per year).

- c) Sections 215.483 through 215.485 apply to a plant having one or more emissions sources that:
- 1) are used to manufacture pharmaceuticals; and
  - 2) emit more than 6.8 kg/day (15 lbs/day) of volatile organic material and more than 2268 kg/year (2.5 tons/year) of volatile organic material, or, if less than 2.5 tons/year, these sections still apply if emissions from one or more emission sources exceed 45.4 kg/day (100 lbs/day).
- d) No person shall violate any condition in a permit when the condition results in exclusion of an emission source from this Subpart ~~F~~.
- e) Emissions subject to this Subpart shall be controlled at all times, consistent with the requirements set forth in this Subpart.
- f) Control devices required pursuant to Section 215.483 shall be operated at all times.
- g) If a pharmaceutical manufacturing emission source becomes subject to the provisions of Sections 215.481, 215.482 or 215.486 on or after the compliance date specified in Section 215.490(a), the requirements of such section shall continue to apply to the emission source even if there is a reduction in emissions as to be below the applicability criteria of this Section.
- h) Determinations of daily and/or annual emissions
- 1) Determinations of daily and/or annual emissions for purposes of this Section shall be made using:
    - (A) data on the hourly emission rate or the emission per unit of throughput, and
    - (B) appropriate daily and annual data from records of emission source operation or material throughput, or material consumption.
  - 2) In the absence of representative test data pursuant to Section 215.487 for the hourly emission rate or emission rate per unit



of throughput, such items shall be determined using engineering calculations, including the methods described in Appendix B of "Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products", incorporated by reference at Section 215.105.

- 3) This subsection shall not affect the Agency's authority to require emissions tests to be performed pursuant to Section 215.487.

(Source: Amended at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 215.481

Control of Reactors, Distillation Units, Crystallizers, Centrifuges and Vacuum Dryers

- a) The owner or operator shall control all reactors, distillation units, crystallizers, centrifuges and vacuum dryers that are used to manufacture pharmaceuticals with surface condensers ~~operated such that the condenser outlet gas temperature does not exceed~~ or other air pollution control equipment listed in subsection (a)(2).

- 1) If a surface condenser is used, it shall be operated such that the condenser outlet gas temperature does not exceed:

1A) 248.2 K (-13 F) when condensing volatile organic material of vapor pressure greater than 40.0 kPa (5.8 psi) at 294.3 K (70 F); or

2B) 258.2 K (5 F) when condensing volatile organic material of vapor pressure greater than 20.0 kPa (2.9 psi) at 294.3 K (70 F); or

3C) 273.2 K (32 F) when condensing volatile organic material of vapor pressure greater than 10.0 kPa (1.5 psi) at 294.3 K (70 F); or

4D) 283.2 K (50 F) when condensing volatile organic material of vapor pressure greater than 7.0 kPa (1.0 psi) at 294.3 K (70 F); or

5E) 298.2 K (77 F) when condensing

volatile organic material of vapor pressure greater than 3.45 kPa (0.5 psi) at 294.3 K (70 F).

2) If a scrubber, carbon adsorber, thermal incinerator, catalytic incinerator or other air pollution control equipment other than a surface condenser is used, such equipment shall provide a reduction in the emissions of volatile organic material of 90 percent or more.

- b) The owner or operator shall enclose all centrifuges used to manufacture pharmaceuticals and that have an exposed volatile organic liquid surface, where the volatile organic material in the volatile organic liquid has a vapor pressure of 3.45 kPa (0.5 psi) or more at 294.3 K (70 F), except as production, sampling, maintenance or inspection procedures require operator access.

(Source: Amended at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 215.482 Control of Air Dryers, Production Equipment Exhaust Systems and Filters

- a) The owner or operator of an air dryer or production equipment exhaust system used to manufacture pharmaceuticals shall control the emissions of volatile organic material from such emission sources by air pollution control equipment which reduces by 90 percent or more the volatile organic material that would otherwise be emitted into the atmosphere.
- b) The owner or operator shall enclose all rotary vacuum filters and other filters used to manufacture pharmaceuticals and that have an exposed volatile organic liquid surface, where the volatile organic material in the volatile organic liquid has a vapor pressure of 3.45 kPa (0.5 psi) or more at 294.3 K (70 F), except as production, sampling, maintenance or inspection procedures require operator access.

(Source: Amended at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 215.483 Material Storage and Transfer

The owner or operator of a pharmaceutical manufacturing plant shall:

- a) Provide a vapor balance system ~~or equivalent control system~~ that is at least 90.0 percent effective in

reducing volatile organic material emissions from truck or railcar deliveries to storage tanks with capacities equal to or greater than 7.57m<sup>3</sup> (2,000 gallons) that store volatile organic liquids with vapor pressures greater than 28.0 kPa (4.1 psi) at 294.3 K (70 F); and

- b) Install, operate and maintain pressure/vacuum conservation vents set at 0.2 kPa (0.03 psi) or greater on all storage tanks that store volatile organic liquids with vapor pressures greater than 10 kPa (1.5 psi) at 294.3 K (70F), ~~unless a control system that allows less VOM to be emitted is used.~~

(Source: Amended at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### Section 215.484 In-Process Tanks

The owner or operator shall install covers on all in-process tanks used to manufacture pharmaceuticals and containing a volatile organic liquid at any time. These covers must remain closed, except ~~when~~as production, sampling, maintenance, or inspection procedures require operator access.

(Source: Amended at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### Section 215.485 Leaks

The owner or operator of a pharmaceutical manufacturing plant shall repair any component from which a leak of volatile organic liquid can be observed. The repair shall be completed as soon as practicable but no later than 15 days after the leak is found unless the leaking component cannot be repaired until the process unit is shut down, and the leaking component must then be repaired before the unit is restarted.

(Source: Amended at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### Section 215.486 Other Emission Sources

The owner or operator of a washer, laboratory hood, ~~capsule~~tablet coating operation, mixing operation, or any other process emission source not subject to Section 215.481 through 215.485 of this Subpart, and used to manufacture pharmaceuticals shall control the emissions of volatile organic material from such emission sources by:

- a) Air pollution control equipment which reduces by 81 percent or more the volatile organic material that would otherwise be emitted to the atmosphere, or
- b) A surface condenser which captures all the volatile

organic material which would otherwise be emitted to the atmosphere and which meets the requirements of Section 215.481(a) of this Subpart.

(Source: Amended at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 215.487 Testing

- a) Upon reasonable request by the Agency, the owner or operator of any volatile organic material emission source subject to this Subpart or exempted from this Subpart by provisions of Section 215.480(a), (b) or (c) shall, at his own expense, demonstrate compliance by methods or procedures listed in Section 215.487(c); and
- b) All tests pursuant to Section 215.487(a) shall be performed in conformance with the procedures set forth in 35 Ill. Adm. Code 283A. A person planning to conduct a volatile organic material emissions test to demonstrate compliance with or determine applicability of provisions of this Subpart shall notify the Agency of that intent to test not less than 30 calendar days prior to the planned initiation of the test.
- c) Test procedures to determine operation and maintenance compliance with and applicability of this Subpart are in 40 CFR Part 60, Appendix A, incorporated by reference at Section 215.105, and shall be used as delineated below: shall be consistent with EPA 450/2-78-041, incorporated by reference in Section 215.105. Procedures for testing air pollution control equipment to determine compliance with this Subpart shall use Part 230, Appendix A Method 25 (40 C.F.R. 60, Appendix A Method 25).
- 1) 40 CFR Part 60, Appendix A, Methods 18, 25 or 25A, as appropriate to the conditions at the site, shall be used to determine VOM concentration. Method selection shall be based on consideration of the diversity of organic species present and their total concentration and on consideration of the potential presence of interfering gases. Except as indicated in subsections (c)(1)(A) and (c)(1)(B), the test shall consist of three separate runs, each lasting a minimum of 60 minutes, unless the Agency determines that process variables dictate shorter sampling

times.

- A) When the method is to be used to determine the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual adsorber vessels, the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all the individual adsorber vessels.
- B) When the method is to be used to determine the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each adsorber vessel, each adsorber vessel shall be tested individually. The test for each adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.
- 2) 40 CFR Part 60, Appendix A, Method 1 or 1A shall be used for sample and velocity traverses.
- 3) 40 CFR Part 60, Appendix A, Method 2, 2A, 2C or 2D shall be used for velocity and volumetric flow rates.
- 4) 40 CFR Part 60, Appendix A, Method 3 shall be used for gas analysis.
- 5) 40 CFR Part 60, Appendix A, Method 4 shall be used for stack gas moisture.
- 6) 40 CFR Part 60, Appendix A, Methods 2, 2A, 2C, 2D, 3 and 4 shall be performed, as applicable, at least twice during each test run.
- d) This section shall not affect the authority of the U.S. Environmental Protection Agency under Section 114 of the Clean Air Act.

(Source: Amended at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 215.488

Monitors for Air Pollution Control  
Equipment

- a) At a minimum, continuous monitors for the following parameters shall be installed on air pollution control equipment subject to this Subpart:
- 1) Destruction device combustion temperature;
  - 2) Temperature rise across a catalytic afterburner bed;
  - 3) Breakthrough of volatile organic material on a carbon absorption unit;
  - 4) Outlet gas temperature of a refrigerated condenser;
  - 5) Temperature of a non-refrigerated condenser coolant supply system.
- b) Each monitor shall be equipped with a recording device.
- c) Each monitor shall be calibrated quarterly.
- d) Each monitor shall operate at all times while the associated control equipment is operating.

(Source: Amended at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 215.489

~~Compliance Schedule~~ Recordkeeping

- a) The owner or operator of a pharmaceutical manufacturing plant shall maintain the following records:
- 1) The parameters listed in Section 215.488 shall be recorded.
  - 2) For sources subject to Section 215.481, the vapor pressure of the volatile organic material being controlled shall be recorded for every process.
- b) For any leak subject to Section 215.485 which cannot be readily repaired within one hour after detection, the following records shall be kept:
- 1) The name of the leaking equipment.
  - 2) The date and time the leak is detected.
  - 3) The action taken to repair the leak.

- 4) The date and time the leak is repaired.
- c) The following records shall be kept for emission sources subject to Section 215.484 which contain volatile organic liquid:
- 1) For maintenance and inspection:
    - A) The date and time each cover is opened.
    - B) The length of time the cover remains open.
    - C) The reason why the cover is opened.
  - 2) For production and sampling, written procedures or manufacturing directions specifying the circumstances under which covers may be opened and the procedures for opening covers.
- d) For each emission source used in manufacture of pharmaceuticals for which the owner or operator of a pharmaceutical manufacturing plant claims emission standards are not applicable because the emissions are below the applicability cutoff in Section 215.480(a) or (b), the owner or operator shall:
- 1) Maintain a demonstration, including detailed engineering calculations, of the maximum daily and annual emissions for each such emission source showing that the emissions are below the applicability cutoffs in Section 215.480(a) or (b), as appropriate, for the current and prior calendar years;
  - 2) Maintain operating records for each emission source to identify whether the cutoffs in Section 215.480(a) or (b), as appropriate, are ever exceeded; and
  - 3) Provide written notification to the Agency within 30 days of a determination that such an emissions source has exceeded the applicability cutoff of Section 215.480(a) or (b), as appropriate.
- e) Records required under this section shall be maintained by the owner or operator for a minimum of two years after the date on which they are made.

- f) Copies of the records shall be made available to the Agency upon verbal or written request.

(Source: Renumbered to Section 215.490 and added at 15 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

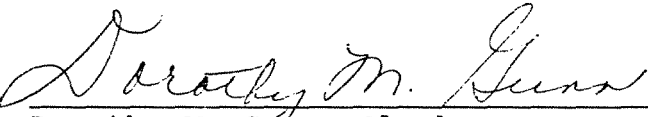
215.490                    Compliance Schedule

- a)                    The owner or operator of an emission source subject to this Subpart, the construction or modification of which has commenced prior to ~~April 15, 1988~~ (the effective date of these amendments), must complete onsite construction, modification or installation of the emission control and/or process equipment, ~~or both, or complete any necessary production process changes~~ so as to operate in compliance with this Subpart by April ~~130~~, 19891.
- b)                    The owner and operator of any emission source subject to this Subpart, the construction or modification of which has not commenced prior to ~~April 15, 1988~~ (the effective date of these amendments), shall construct such source so that it will operate in compliance with this Subpart.

(Source: Renumbered from Section 215.489 and amended at 15 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 25<sup>th</sup> day of April, 1991 by a vote of 7-0.

  
 \_\_\_\_\_  
 Dorothy M. Gunn, Clerk  
 Illinois Pollution Control Board