

ILLINOIS POLLUTION CONTROL BOARD
August 6, 1987

IN THE MATTER OF:)
)
AMENDMENTS TO 35 ILL. ADM.) R86-12
CODE 211 AND 215, ORGANIC)
MATERIAL EMISSION STANDARDS)
AND LIMITATIONS, FOR POLYSTYRENE)
PLANTS)

PROPOSED RULE SECOND NOTICE

OPINION AND ORDER OF THE BOARD (by B. Forcade):

This matter comes before the Board on a March 11, 1986, regulatory proposal by the Illinois Environmental Protection Agency (Agency) for the control of organic material emissions from polystyrene plants. Hearings were held on October 15, 1986, in Chicago and on October 16, 1986, in Joliet. Comments were received through January 23, 1987. On January 16, 1987, the Department of Energy and Natural Resources (DENR) filed a letter of negative declaration of economic impact, obviating the need for further economic study of the proposed rules. The Economic and Technical Advisory Committee of the DENR filed a concurrence on January 22, 1987. The Agency filed an amended proposal on April 6, 1987, which entailed non-substantive codification changes.

On May 28, 1987, the Board proposed regulatory language for first notice comment which was published at 11 Ill. Reg. 10985, June 19, 1987. The statutory 45-day comment period ended on August 3, 1987. The Agency filed first notice comments, which were mailed on August 3, 1987 (P.C. 2). The Administrative Code Unit of the Secretary of State's office also filed comments regarding non-substantive format changes. Those changes have been incorporated in today's second notice order. Additionally, the Board deletes one of the incorporations by reference, as unnecessary to this regulation.

A detailed discussion of the evidence and Board resolution of the issues is provided in the May 28, 1987, Opinion in this matter and will not be repeated here. However, a brief summary is provided. Today's proposal is one of a series of Board actions directed at promulgating rules implementing reasonably available control technology ("RACT") for the control of ozone precursors from existing major stationary sources (emissions greater than 100 tons/year). The implementation of RACT in non-attainment areas for ozone is required as part of a federally approvable state implementation plan under the federal Clean Air Act, 42 U.S.C. 7401 et seq. The proposed rules would control

volatile organic material ("VOM") emissions from major stationary polystyrene plants. Four facilities were identified as being regulated by the proposed rules in urbanized non-attainment planning areas. All four facilities appear to be currently in compliance with the proposed rule. Consequently, there is no cost associated with compliance with these rules.

The Agency, in its comments, notes that there are currently pending proposed amendments to the definition of "volatile organic material" (VOM) in a separate docket, R86-37. These proposed amendments would delete the vapor-pressure based definition of VOM and would modify the definition proposed in the instant docket. The Agency recommends deleting the definition contained in the Board's proposed rule in the R86-12 docket and replace it with the proposed definition in R86-37. The Board believes that the best course of action is to retain the existing definition of VOM proposed at Section 215.104 in this proceeding and address the proposed redefinition of VOM in the R86-37 docket. First, there is no record established in the instant proceeding supporting such a change. Second, the Board has not yet substantively ruled on the merits regarding the proposed redefinition of VOM pending in R86-37, as the record still remains open. (See R86-37, Proposed Redefinition of VOM, Opinion and Order, July 16, 1987.) The Board, by this discussion, does place the potentially affected polystyrene manufacturing sources on notice of the proposed redefinition of VOM pending in docket R86-37.

The Board will propose rules for second notice review by the Joint Committee on Administrative Rules. This action will help fulfill the state's legal obligations to demonstrate that existing major stationary VOM emission sources in non-attainment planning regions are subject to regulations representing RACT.

ORDER

The following amendments to 35 Ill. Adm. Code 215 are directed to second notice review by the Joint Committee on Administrative Rules.

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

PART 215
ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS

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<u>215.879</u>	<u>Compliance Date</u>
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- 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

AUTHORITY: Implementing Section 10 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1985, ch. 111 $\frac{1}{2}$, pars. 1010 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 R86-12 at _____ Ill. Reg. _____, effective _____.

SUBPART A: GENERAL PROVISIONS

Section 215.104 Definitions

The definitions of 35 Ill. Adm. Code 201 and 211 apply to this Part, as well as the definition contained in this Section. Where the definition contained in this Section is more specific than that found in Parts 201 or 211, it shall take precedence in application of this Part.

"Binders": Organic materials and resins which do not include volatile organic materials.

"Clear Topcoat": The final coating which contains binders, but not opaque pigments, and is specifically formulated to form a transparent or translucent solid protective film.

"Continuous Process": A method of manufacture of polystyrene resin in which the styrene raw material is delivered on a continuous basis to the reactor in which the styrene is polymerized to polystyrene.

"Conventional Soybean Crushing Source": Any hexane extraction soybean crushing equipment that uses direct contact steam for desolventizing and producing toasted soy meals.

"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 pipes. This definition excludes valves which are not externally regulated, flanges, and equipment in heavy liquid service. For purposes of Subpart Q, this definition also excludes ball and plug valves.

"Furniture Coating Application Line": The combination of coating application equipment, flash-off area, spray booths, ovens, conveyors, and other equipment operated in a predetermined sequence for purpose of apply coating materials to wood furniture.

"Heatset": A class of web offset lithography which requires a heated dryer to solidify the printing inks.

"Heavy Liquid": Liquid with a true vapor pressure of less than 0.3 kPa (0.04 psi) at 294.3 K (70 F) established in a standard reference text or as determined by ASTM method D-2879; or which has 0.1 Reid Vapor Pressure as determined by ASTM method D-323; or which when distilled requires a temperature of 421.95K (300 F) or greater to recover 10% of the liquid as determined by ASTM method D-86.

"Light Liquid": Volatile organic material in the liquid state which is not defined as heavy liquid.

"Light Oil": A liquid condensed or absorbed from coke oven gas composed of benzene, toluene, and xylene.

"Material Recovery Section": Any equipment designed to transport and recover styrene monomer and other impurities from other products and by-products in a polystyrene plant, including but not limited to the styrene devolatilizer unit and styrene recovery unit.

"Offset": Use of a blanket cylinder to transfer ink from the plate cylinder to the surface to be printed.

"Opaque Stains": All stains containing pigments not classified as semi-transparent stains including stains, glazes and other opaque material to give character to wood.

"Pigments Coatings": Opaque coatings containing binders and colored pigments which are formulated to conceal the wood surface either as an undercoat or topcoat.

"Polystyrene Plant": Any plant using styrene to manufacture polystyrene resin.

"Polystyrene Resin": A substance consisting of styrene polymer and additives which is manufactured at a polystyrene plant.

"Repair Coatings": Coatings to correct imperfections or damage to furniture surface.

"Sealer": Coating containing binders which seals the wood prior to application to subsequent coatings.

"Semi-transparent Stains": Stains containing dyes or semi-transparent pigments which are formulated to enhance wood grain and change the color of the surface but not to conceal the surface, including, but not limited to, sap stain, toner, non-grain raising stains, pad stain, spatter stain.

"Specialty Soybean Crushing Source": Any hexane extraction soybean crushing equipment using indirect steam heat in flash or vapor desolventizers as the primary method of desolventizing and producing specialty solvent extracted soy flakes, grits or flour.

"Styrene Devolatilizer Unit": Equipment performing the function of separating unreacted styrene monomer and other volatile components from polystyrene in a vacuum devolatilizer.

"Styrene Recovery Unit": Equipment performing the function of separating styrene monomer from other less volatile components of the styrene devolatilizer unit's output. The separated styrene monomer may be reused as raw material in the polystyrene plant.

"Volatile Organic Material":

Any organic material which has a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3 K (70 F). For purposes of this definition, the following are not volatile organic materials:

Methane
Ethane
1,1,1-trichloroethane
Methylene chloride
Trichlorofluoromethane
Dichlorodifluoromethane
Chlorodifluoromethane
Trifluoromethane
Trichlorotrifluoroethane
Chloropentafluoroethane

For purposes of the following Sections, volatile organic materials are any organic materials having the corresponding vapor pressures at 294.3 K (70 F):

<u>Sections</u>	<u>Vapor Pressure</u>	
215.181 - 215.184	0.013 kPa	(.0019 psia)
215.104 - 215.209	0.013 kPa	(.0019 psia)
215.340 - 215.345	0.013 kPa	(.0019 psia)
215.401 - 215.408	0.013 kPa	(.0019 psia)
215.420 - 215.428	0.013 kPa	(.0019 psia)
215.441 - 215.444	10.34 kPa	(1.5 psia)
215.445 - 215.451	0.013 kPa	(.0019 psia)
215.461 - 215.464	0.013 kPa	(.0019 psia)
215.875 - 215.886	0.013 kPa	(.0019 psia)

215.510 - 215.513 0.013 kPa (.0019 psia)
215.601 - 215.613 0.013 kPa (.0019 psia)

"Wash Coat": Coating containing binders which seals wood surfaces, prevents undesired staining and controls penetration.

"Web": A substrate which is printed in continuous roll-fed presses.

"Wood Furniture": Room furnishings including cabinets (kitchen, bath and vanity), tables, chairs, beds, sofas, shutters, art objects, wood paneling, wood flooring, and any other coated furnishings made of wood, wood composition or fabricated wood materials.

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

Section 215.105 Incorporations 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 1633-59 Method A
 - 2) ASTM D 1475-60
 - 3) ASTM D 2369-73
 - 4) ASTM D 2879 - 83 (Approved 1983)
 - 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)
- b) Federal Standard 141a, Method 4082.1
- c) National Fire Codes, National Fire Protection Association, Battery March Park, Quincy, Massachusetts 02269 (1979)
- d) United States Environmental Protection Agency, Washington, D.C., EPA-450/2-77-026, Appendix A

- e) Standard Industrial Classification Manual, published by Executive Office of the President, Office of Management and Budget, Washington, D.C., 1972

(Board Note: The incorporations by reference listed above contain no later amendments or editions.)

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

SUBPART BB: POLYSTYRENE PLANTS

Section 215.875 Applicability of Subpart BB

The provisions of this Subpart shall apply to polystyrene plants:

- a) Which are located in any of the following counties: Will, McHenry, Cook, DuPage, Lake, Kane, Madison, St. Claire, Monroe and Macoupin;
- b) Which use continuous processes to manufacture polystyrene - polybutadiene co-polymer; and
- c) Which fall within Standard Industrial Classification Group No. 282, Industry No. 2821, except that the manufacture of polystyrene resins need not be the primary manufacturing process at the plant.

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

Section 215.877 Emissions Limitation at Polystyrene Plants

No person shall cause or allow the emissions of volatile organic material from the material recovery section to exceed 0.12 kg of Volatile Organic Material per 1000 kg of polystyrene resin produced.

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

Section 215.879 Compliance Date

Every owner and operator of an emission source subject to this Subpart shall comply with its standards and limitations by December 31, 1987.

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

Section 215.881 Compliance Plan

- a) The owner or operator of an emission source subject to the requirements of this Subpart shall submit to the Agency a compliance plan in accordance with 35 Ill. Adm. Code 201. Subpart H, including a project completion schedule where applicable, on or before December 1, 1987.
- b) Unless the submitted compliance plan or schedule is disapproved by the Agency, the owner or operator of a facility or emission source subject to this Subpart may operate the emission source according to the plan and schedule as submitted.
- c) The plan and schedule shall meet the requirements of 35 Ill. Adm. Code 201. Subpart H.

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

Section 215.883 Special Requirements for Compliance Plan

For sources subject to this Subpart, an approvable compliance plan shall include:

- a) A complete description of each process which is subject to an emissions limitation;
- b) Quantification of the emissions from each process;
- c) A description of the procedures and methods used to determine the emissions of volatile organic material;
- d) A description of the methods which will be used to demonstrate compliance with the allowable plantwide emission limitation, including a method of inventory, recordkeeping and emission calculation or measurement.

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

Section 215.886 Testing and Monitoring

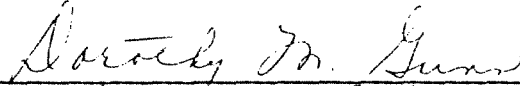
- a) Upon a reasonable request of the Agency, the owner or operator of a polystyrene plant subject to this Subpart shall at his own expense demonstrate compliance by use of the following method: 40 CFR 60, Appendix A, Method 25 (1984).

b) A person planning to conduct a volatile organic material emissions test to demonstrate compliance with this Subpart shall notify the Agency of that intent not less than 30 days before the planned initiation of the tests so the Agency may observe the test.

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

IT IS SO ORDERED

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Proposed Rule, Second Notice Opinion and Order was adopted on the 6th day of August, 1987, by a vote of 6-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board