ILLINOIS POLLUTION CONTROL BOARD
December 22, 1987

IN THE MATTER OF:	)	
	)	
DEFINITION OF VOLATILE	)	R86-37
ORGANIC MATERIAL,	)	
SECTION 215.104	)	

ADOPTED RULE. FINAL NOTICE.

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

This matter comes before the Board upon proposed amendments to 35 Ill. Adm. Code 211 and 215 filed on behalf of the Illinois Environmental Protection Agency (Agency). The original Agency proposal for redefining the term "volatile organic material" (VOM) as defined in Section 215.104 was presented in the R82-14 Heatset Web Offset Lithography proceeding at hearing held April 1, 1986. Pursuant to Board Interim Opinion and Order, dated September 11, 1986, the VOM definition portion was severed from R82-14 and given a new docket. The new docket, R86-37, contained the original (as proposed in R82-14) Agency proposal, which was amended at hearing held March 2, 1987, in Chicago. A second hearing was held March 3, 1987, in Waukegan. The Agency filed a second amended proposal on May 7, 1987, and a third amended proposal on June 8, 1987. The third and final hearing was held June 30, 1987.

On July 16, 1987, the Board adopted an Order sending the Agency's proposed amendments to First Notice. At that time, the Board took no position on the merits of the Agency's proposal. The Board's action was founded upon its concern that the proceeding progress as quickly as possible so as to comply with the time requirements imposed by the Clean Air Act. The Department of Energy and Natural Resources filed a negative declaration on August 26, 1987, and the Economic and Technical Advisory Committee concurred with that declaration on September 30, 1987. The proposed amendments were published at 11 Ill. Reg. 13788 and 13812 on August 21, 1987. The statutory 45-day comment period ended on October 5, 1987. Non-substantive comments were received from the Secretary of State's Administrative Code Unit regarding form and format of the proposed rules. Those changes were made at Second Notice. Three substantive comments were filed in this proceeding: Croda Inks Corporation (Croda) filed Public Comment No. 1 on May 27, 1987; World Color Press, Inc. (World Color) filed Public Comment No. 2 on October 5, 1987; and Amoco Corporation (Amoco) filed Public Comment No. 3 on October 6, 1987. On October 23, 1987, the Board adopted the Second

Notice Opinion and Order, and sent the proposed regulations to the Joint Committee on Administrative Rules (JCAR) for review.

BACKGROUND

The regulations are intended to correct deficiencies in the Illinois State Implementation Plan (SIP) which have been identified by the United States Environmental Protection Agency (USEPA). The deficiency in the present definitions of VOM is that the definitions specify a minimum vapor pressure which an organic material must possess to qualify as a volatile organic material. This approach is not consistent with USEPA's current approach to "organic precursors to ozone." The current concerns are (1) whether the organic substance is emitted to the atmosphere in a gaseous form so that it is available to react to form ozone, and (2) whether the chemical nature of the substance is such that it is reactive. Under USEPA terminology, if an organic substance meets these criteria, the substance is, by definition, "volatile".

DEFINITION OF VOM

The Agency proposal deleted any reference to vapor pressure in its definition of VOM except for those sources of VOM for which the vapor pressure criterion is needed to specify the emission limitation. The Agency definition for VOM is based on a USEPA document, "Guidance to State and Local Agencies in Preparing Regulations to Control Volatile Organic Compounds from Ten Stationary Source Categories" submitted as Exhibit 2 and follows the definition of "volatile organic compound" (VOC) at 40 CFR 60.2. The Agency's proposed definition and that adopted at First Notice read:

> any organic material which participates in atmospheric photochemical reactions or is measured by the applicable reference methods specified under Part 230, Appendix A, unless specifically exempted from this definition.

Eleven VOMs are specifically identified as being exempt from the definition. By the above definition, an organic material is a VOM if (1) it participates in atmospheric photochemical reactions or (2) it can be measured in accordance with reference methods in Part 230, Appendix A (i.e., 40 CFR 60, Appendix A). This definition is based on USEPA guidance and terminology which labels any organic substance as a volatile organic substance or VOM whose chemical nature and availability, when emitted into the atmosphere in a gaseous form, allows its participation in reactions to form ozone. The presumption in USEPA's terminology is that the criterion of reactivity to form ozone is satisfied by all organic compounds unless specifically exempted. This intent is contained in the first aspect of the Agency proposed

definition. However, the Agency proposed definition also makes an organic material's measurability in accordance with a set of reference methods a criterion for calling it a VOM. Since the measurability criterion alone is insufficient to determine whether an organic material will participate in a photochemical reaction, the Board believes that the second aspect should be separated.

In fact, a USEPA memorandum from G.T. Helms, Chief, Control Programs Operations Branch, to all the Regions on the definition of VOC (referred to as VOM in Illinois) submitted as Exhibit 11 contains USEPA's recommended definition that would also be approved. In this recommendation, the methods by which VOC may be measured are stated but are not made a criterion for determining if the organic compound is a VOM. Chris Romaine, who testified on behalf of the Agency, also stated that "the body of Test Methods cited in the proposed definitions were devised specifically to measure or predict gaseous emissions of organic substances" (R. 27 at June 30, 1987, hearing). Thus, the record established that the reference methods measure concentrations and do not determine reactivity. The Board separated these two aspects at Second Notice.

The Board is concerned that the proposed language "an organic material which participates in atmospheric photochemical reactions" is overly broad and may include such particulates as soot, coal dust and grain dust. The Board believes that these types of particulates, i.e. solid organic compounds, were not intended to be brought within the definition of VOM. The Board finds support for this position in the testimony of Chris Romaine (R. 32-33 at June 30, 1987, hearing). Mr. Romaine testified that a term was needed to distinguish the solid organic compounds (i.e. soot, coal dust, grain dust, etc.) from organic compounds present in the atmosphere in a gaseous or volatilized state which may participate in photochemical ozone reactions. Mr. Romaine continued:

> as already explained, the term organic compound or organic material does not make this distinction, (although this result is achieved in the context of specific regulations). The term volatile organic compounds does make the distinction between gaseous or volatilized materials and other materials. The volatile organic compounds became the label for the air contaminant which is the organic precursor to ozone formation. (R. 33 at June 30, 1987, hearing).

Although the Board did not amend the proposed language at Second Notice, the Board interprets the language "an organic material which participates in photochemical reactions" as

excluding materials, such as soot, coal dust, grain dust, etc., which are not volatilized into the atmosphere.

DEFINITIONS OF "GAS SERVICE" AND "LIQUID SERVICE"

The Agency proposed to amend the definitions of "gas service" and "liquid service". The Agency's proposed definitions delete the terms "equipment" and "volatile organic material". Instead, "Component", which is presently defined in Sections 211.122 and 215.104, is used in the Agency's proposed definitions to be more specific and to be consistent with the federal definitions (see R. 64-67 at June 30, 1987, hearing). The definitions of "gas service" and "liquid service" were not changed at Second Notice. In response to comments received from JCAR, "equipment" was added back into the definition of "liquid service". The language now reads "equipment or component".

DEFINITION OF "VOLATILE ORGANIC LIQUID"

The Agency proposed to add a definition of "volatile organic liquid". This definition is developed from the definition of volatile organic liquid found at 40 CFR 60.111b(k) (52 Fed. Reg. 11430). The Agency recognized the effect of deleting the vapor pressure criteria, previously used in defining VOM, when the vapor pressure of a volatile organic substance is properly related to the applicability of an emission limitation. The definition for VOM is as an air contaminant or as a potential air contaminant. In order to maintain this definition, the Agency has proposed the term "volatile organic liquid". The explanation for the introduction of this term is included along with some examples of its application in the transcript (R. 42-47 at June 30, 1987, hearing). The Agency definition is "any liquid which contains volatile organic material."

TESTING METHODS

The Agency proposed to amend Section 215.102, Testing Methods, to add a subsection on the measurement of vapor pressures. In the Second Notice Order, the Board noted that a concurrent proceeding, R86-10, Emission Standards and Limitations for Pharmaceutical Manufacturing Plants, also considered proposed amendments to Section 215.102. Early in that proceeding, language was proposed identical to that adopted here at first notice. Subsequent to the First Notice order, however, language was added in R86-10 to clarify (1) "other standard reference tests" and (2) the methods by which actual vapor pressures shall be determined for mixtures. Unlike the record in this proceeding, the record in R86-10 included substantial discussion of these issues, especially number (2). For these reasons, the Board deemed it appropriate at Second Notice to incorporate into proposed Section 215.102 of this proceeding the clarifying language proposed in R86-10. This also maintained consistency

between the two proceedings and put the regulated community and the public on notice that this section is also being amended in R86-10.

During Second Notice, JCAR expressed its view that the language of Section 215.102(b)(1), as written, included an improper series of incorporations by reference. In particular, JCAR stated that the texts cited for use in obtaining vapor pressure are not proper sources for incorporation by reference. Thus, subsection (b)(1) was rewritten to avoid the characterization of the texts as incorporations by reference.

PUBLIC COMMENT

This section sets forth the public comments and Board responses from the Second Notice Opinion:

Amoco (P.C. No. 3) filed comments on the measurement procedure for a mixture of organic materials. Amoco questions the use of the calculations specified in Section 215.102(b)(2)(A) and (B) and suggests that an approved American Society of Testing and Materials (ASTM) method be specified instead. However, Amoco does not indicate which ASTM method(s) would be applicable to a mixture. Although the Board agrees that an applicable ASTM testing method would be appropriate for incorporation in addition to the methods specified at second notice, the time constraints associated with this proceeding do not permit the Board to conduct its own research to discover applicable ASTM test methods at this time. The Board notes that a facility may seek usage of an applicable ASTM method via site-specific rulemaking or other means.

Croda submits in Public Comment No. 1 that the Agency proposed VOM definition does not specify which laboratory test(s), from among the reference test methods in 40 CFR 60, Appendix A, is appropriate to use for a given application. Croda suggests that a list of methods applicable to each industry or category be developed. The discussion on the definition of VOM has shown that the Agency intends VOM to refer primarily to gaseous contaminants. The Agency would specify those methods which are applicable to a specific source and are necessary for determining the quantity of VOM emissions arising from that source. The Agency has conceded that VOM emissions from some sources such as wastewater treatment plant aeration lagoons, cooling towers etc. are not easily measurable. In such cases, a mass (material) balance calculation is performed to estimate emissions (R. 71-73 at March 2, 1987, hearing). The Board has included the use of mass balance calculation as an option for measurement of VOMs at second notice.

The record does not contain sufficient information to include a comprehensive list of reference methods applicable to

each industry category or source. Dr. Reed testified and submitted a USEPA memo (Ex. 6), dated September 14, 1984, which lists the VOC (same as VOM in Illinois) test methods or procedures for source categories in Group I, II and III Control Techniques Guidelines (CTGs). Sources not covered by CTGs are not included in the list. With the existing set of test methods and the guidance that is available from such documents as Exhibit 6 and the manual referenced by Croda entitled, "Procedures for Certifying Quantity of Volatile Organic Compounds Admitted by Paint, Ink and Other Coatings" (EPA-450/3-84-019), the Board believes that there is no special need to include a specific list of test methods for each industry as part of this regulation.

In addition to their previous comments on testing methods, Amoco in Public Comment No. 3 states that a minimum vapor pressure should be established to exempt heavy non-volatile materials. The intent of the proposed VOM definition is to include all organic materials that might volatilize (i.e., vaporize) if the operating temperature of the process involved is sufficiently high. Thus, even "heavy, non-volatile materials" may in fact be volatile and become available for participation in atmospheric photochemical reactions. Therefore, the use of a minimum vapor pressure cutoff for certain organic materials would defeat the purpose for which the definition is being proposed.

World Color Press in Public Comment No. 2 takes exception to the proposed definition of VOM and suggests that the proposed rule does not take into account the difference between volatility and photochemical reactivity or the differences in reactivity of substances. The proposed rule is a conservative rule in that a presumption has been made that all substances which volatilize are available for participation in photochemical reactions in the atmosphere. It is certainly recognized that some organic compounds are more reactive than others as evidenced by the list of substances exempted from the definition of VOM. Present understanding of the chemical mechanisms involved in the production of ozone from hydrocarbon precursors is not complete. It is also a formidable task to test each organic compound to see if it contributes to ozone formation. The present list of compounds exempted from the VOM definition have in fact been developed by USEPA. With regard to the issue of the heatset web offset ink oils (ink solvents), a great deal of information on the ink solvent's volatility and reactivity was presented in the R82-14 hearings, and the Board in its October 1, 1987, final order regulating that industry stated that "[b]ased on this record, the Board cannot accept PII's (Printing Industry of Illinois) argument that a significant portion of the emissions are not available for ozone formation." It was, in fact, because ink solvents are not defined as VOMs according to existing definition of VOM at 35 Ill. Adm. Code 211.122 and 215.104 that the Agency chose to redefine the definition so as to include all VOMs that are likely to contribute to ozone formation.

A second issue raised by World Color Press in Public Comment No. 2 concerns the mechanism by which substances can be added to the VOM exemption list. They have correctly pointed out that no criteria have been set for nominating and showing that a substance is excludable from the definition of VOM. This issue was addressed in questions posed to the Agency at the June 30, 1987, hearing (R. 67-72). The Agency stated that a proposal would have to be made to the Board to amend the definition of VOM and that the record presented before the Board in such a proceeding would probably involve USEPA experts in determinations involving exemptions of specific compounds from the definition of VOM. Specific, well documented scientific evidence for each substance nominated for exemption from the VOM definition would need to be presented in a Board proceeding.

INCORPORATIONS BY REFERENCE

Certain materials have been incorporated into the proposed amendments by reference. The Board notes that in the Second Notice Order it formally incorporated the materials into the incorporations by reference section, Section 211.101 and indicated after each text reference where the material was incorporated. The Board took this action at Second Notice to satisfy the requirements of the Illinois Administrative Procedure Act and of 1 Ill. Adm. Code 220.760. JCAR, however, stated its position that amendment may not be made to a section at Second Notice that was not proposed for amendment at First Notice. Therefore, the language necessary to properly incorporate the materials by reference has been added in the text of the sections incorporating the materials by reference, and Section 211.101 is no longer proposed for amendment.

Finally, the Board notes that in Subsection (a) of the definition of VOM, the reference to "Part 230, Appendix A" has been amended to 40 CFR 60, Appendix A, 1986 (no future amendments or editions are included)." The Board believes that 40 CFR 60 is the more appropriate cite. Prior to recent amendment of the Illinois Environmental Protection Act, the Board was required to adopt rules in substance identical with federal regulations promulgated by the USEPA to implement Sections 111 and 112 of the Clean Air Act. The Board adopted those rules into 35 Ill. Adm. Code 230 and 231. As the incorporation of regulations of a state Agency are not subject to the rules of the Joint Committee on Administrative Rules regarding incorporations by reference, citation to Part 230 offered a mechanism by which to incorporate 40 CFR 60 without limiting the incorporation to a certain date. In other words, citation to Part 230 rendered amendments to 40 CFR 60 applicable upon peremptory amendment to Part 230 whereas citation directly to 40 CFR 60 as of a certain date precluded application of amendments subsequent to that date absent amendment through regular rulemaking procedures. However, because the General Assembly amended Section 9.1 of the

Environmental Protection Act (P.A. 85-719) the Board is no longer authorized to adopt the rules identical in substance with Sections 111 and 112 of the Clean Air Act. Thus, the purpose underlying citation to Part 230 no longer exists. Therefore, the Board will cite directly to 40 CFR 60, Appendix A, as of the most recent edition, 1986, and will incorporate it via the incorporations by reference section, Section 215.105. This approach also permits more efficient updating as new editions of the CFR become available.

ORDER

The Clerk of the Pollution Control Board is hereby directed to submit the following adopted amendments to 35 Ill. Adm. Code 211 and 215 to the Secretary of State for Final Notice:

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

PART 211
DEFINITIONS AND GENERAL PROVISIONS

SUBPART A: GENERAL PROVISIONS

Section
211.101 Incorporations by Reference
211.102 Abbreviations and Units

SUBPART B: DEFINITIONS

Section
211.121 Other Definitions
211.122 Definitions

Section 211.122 Definitions

"Gas Service": ~~equipment which processes, transfers or contains a volatile organic material or mixture of volatile organic materials in a gaseous phase,~~ means that the component contains process fluid that is in the gaseous state at operating conditions.

"Liquid Service": ~~equipment which processes, transfers or contains a volatile organic material or mixture of volatile organic materials in a liquid phase~~ means that the equipment or component contains process fluid that is in a liquid state at operating conditions.

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

"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 35 Ill. Adm. Code 215.442 through 215.444, volatile organic material means any organic material which has a vapor pressure of 10.34 kPa (1.5 psia) at 294.3-K (70-F). For purposes of 35 Ill. Adm. Code 215.181 through 215.184, 215.445 through 215.451, 215.204 through 215.209, 215.340 through 215.345, 215.401 through 215.404, 215.461 through 215.464 and 215.601 through 215.603, volatile organic material means any organic material which has a vapor pressure greater than 0.013 kPa (.0019 psia) at 294.3-K (70-F).~~

a) any organic material which participates in atmospheric photochemical reactions unless specifically exempted from this definition. Volatile organic material emissions shall be measured by the reference 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.

b) For purposes of this definition, the following are not volatile organic materials:

Chlorodifluoromethane
Chloropentafluoroethane
Dichlorodifluoromethane
Dichlorotetrafluoroethane
Ethane
Methane
Methylene chloride
1,1,1, Trichloroethane
Trichlorofluoromethane
Trichlorotrifluoroethane
Trifluoromethane

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

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

SUBPART A: GENERAL PROVISIONS

SUBPART B: ORGANIC EMISSIONS FROM STORAGE AND LOADING OPERATIONS

SUBPART C: ORGANIC EMISSIONS FROM MISCELLANEOUS EQUIPMENT

SUBPART R: PETROLEUM REFINING AND RELATED INDUSTRIES; ASPHALT MATERIALS

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-2789-83 (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 (1986-87), Lange's Handbook of Chemistry, John A. Dean, editor, McGraw-Hill Book Company (1985).

2) For a mixture, the actual vapor pressure shall be taken as:

A) If the vapor pressure of the organic material or volatile organic material is not 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 ___ Ill. Reg. _____, effective _____)

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.

~~"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):~~

~~Sections~~	~~Vapor Pressure~~
~~215.181 - 215.184~~	~~0.013 kPa (.0019 psia)~~
~~215.204 - 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)~~
~~215.510 - 215.513~~	~~0.013 kPa (.0019 psia)~~
~~215.601 - 215.613~~	~~0.013 kPa (.0019 psia)~~

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

Section 215.121 Storage Containers

No person shall cause or allow the storage of any volatile organic ~~material~~ liquid with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3 K (70 F) or any gaseous organic material in any stationary tank, reservoir or other container of more than 151 cubic meters (40,000 gal) capacity unless such tank, reservoir or other container:

a) Is a pressure tank capable of withstanding the vapor pressure of such ~~materials~~ liquid or the pressure of the

gas, so as to prevent vapor or gas loss to the atmosphere at all times; or

b) Is designed and equipped with one of the following vapor loss control devices:

1) A floating roof which rests on the surface of the volatile organic ~~material~~ liquid and is equipped with a closure seal or seals between the roof edge and the tank wall. Such floating roof shall not be permitted if the volatile organic ~~material~~ liquid has a vapor pressure of 86.19 kPa (12.5 psia) or greater at 294.3 K (70 F). No person shall cause or allow the emission of air contaminants into the atmosphere from any gauging or sampling devices attached to such tanks, except during sampling or maintenance operations.

2) A vapor recovery system consisting of:

A) A vapor gathering system capable of collecting 85% or more of the uncontrolled volatile organic material that would be otherwise emitted to the atmosphere; and

B) A vapor disposal system capable of processing such volatile organic material so as to prevent its emission to the atmosphere. No person shall cause or allow the emission of air contaminants into the atmosphere from any gauging or sampling devices attached to such tank, reservoir or other container except during sampling.

3) Other equipment or means of equal efficiency approved by the Agency according to the provisions of 35 Ill. Adm. Code 201.

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

Section 215.122 Loading Operations

a) No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere during the loading of any organic material from the aggregate loading pipes of any loading facility having through-put of greater than 151 cubic meters per day (40,000 gal/day) into any railroad tank car, tank truck or trailer unless such loading facility is equipped with submerged loading pipes or a device that is equally effective in controlling emissions and is

approved by the Agency according to the provisions of 3 Ill. Adm. Code 201.

b) No person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Agency according to the provisions of 35 Ill. Adm. Code 201, or unless such tank is a pressure tank as described in Section 215.121(a) or is fitted with a recovery system as described in Section 215.121(b)(2).

c) Exception: If no odor nuisance exists the limitations of this Section shall only apply to the loading of volatile organic ~~material~~ liquid with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3 K (70 F).

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

Section 215.141 Separation Operations

a) No person shall use any single or multiple compartment effluent water separator which receives effluent water containing 757 l/day (200 gal/day) or more of organic material from any equipment processing, refining, treating, storing or handling organic material unless such effluent water separator is equipped with air pollution control equipment capable of reducing by 85 percent or more the uncontrolled organic material emitted to the atmosphere. Exception: If no odor nuisance exists the limitations of this subparagraph shall ~~only apply to volatile organic material~~ not apply if the vapor pressure of the organic material is below 17.24 kPa (2.5 psia) at 294.3 K (70 F).

b) Subsection (a) shall not apply to water and crude oil separation in the production of Illinois crude oil, if the vapor pressure of such crude oil is less than 34.5 kPa (5 psia).

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

ection 215.142 Pumps and Compressors

) person shall cause or allow the discharge of more than 32.8 ml ! cu in) of ~~liquid~~ volatile organic ~~material~~ liquid with vapor essure of 17.24 kPa (2.5 psia) or greater at 294.3 K (70 F) to the atmosphere from any pump or compressor in any 15 minute riod at standard conditions.

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

Section 215.442 Vacuum Producing Systems

No owner or operator of a petroleum refinery shall cause or allow the operation of any vacuum producing system unless the condensers, hot wells and accumulators of any such system are equipped with vapor loss control equipment including, but not limited to, piping, valves, flame arrestors and hot well covers to vent any volatile organic material with a vapor pressure of 10.34 kPa (1.5 psia) or greater at 294.3 K (70 F) to a heater, fire box, flare, refinery fuel gas system or other equipment or system of equal emission control as approved by the Agency. This Section shall not apply to vacuum producing systems on lube units.

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

Section 215.443 Wastewater (Oil/Water) Separator

No owner or operator of a petroleum refinery shall operate any wastewater (oil/water) separator at a petroleum refinery unless the separator is equipped with air pollution control equipment capable of reducing by 85 percent or more the uncontrolled organic material emitted to the atmosphere. If no odor nuisance exists, the limitation of this Section shall ~~only apply to volatile organic material~~ not apply if the vapor pressure of the organic material is below 10.34 kPa (1.5 psia) at 204.3 K (70 F) at all times.

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

Section 215.444 Process Unit Turnarounds

a) No owner or operator of a petroleum refinery shall cause or allow a refinery process unit turnaround except in compliance with an operating procedure as approved by the Agency.

b) Unless a procedure is already on file with the Agency as part of an approved operating permit no later than November 1, 1979, the owner or operator of a petroleum refinery shall submit to the Agency for approval a detailed procedure for reducing emissions of volatile organic material during refinery process unit turnarounds from organic material with a vapor pressure of

10.34 kPa (1.5 psia) or greater at 294.3 K (70 F). The Agency shall not approve the procedure unless it provides for:

1) Depressurization of the refinery process unit or vessel to a flare, refinery fuel gas system or other equipment or system of equal emission control, as approved by the Agency, until the internal pressure from the vessel or unit is less than 5.0 psig before allowing the vessel to be vented to the atmosphere;

2) Recordkeeping of the following items:

   A) Each date that a refinery unit or vessel is shut down; and

   B) The total estimated quantity of volatile organic material emitted to the atmosphere and the duration of the emission in hours.

(Source: Amended 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 22nd day of December, 1987, by a vote of 6-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board