

ILLINOIS POLLUTION CONTROL BOARD
April 7, 1988

IN THE MATTER OF:)
)
ORGANIC MATERIAL EMISSION)
STANDARDS AND LIMITATIONS:) R86-18
ORGANIC EMISSION GENERIC)
RULE)
)
ADOPTED RULE. FINAL ORDER.

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

This matter comes before the Board on a proposal of the Illinois Environmental Protection Agency (Agency) to control volatile organic material (VOM) through a generic rule. The Agency's first proposal was filed on May 12, 1986. After consultation with the Agency, the Agency suggested hearing dates in October. The first hearings were held on October 24, 1986 in Chicago and October 29, 1986 in Collinsville. At hearing on October 24, the Agency submitted a Revised Proposal. Another hearing was held in Springfield, on December 11, 1986 at which the Agency stated that it would further revise its proposal. A Second Revised proposal was proffered by the Agency at hearing in Springfield on February 10, 1987. Another hearing was held on February 11. Two additional hearings were held in this matter on April 23 and 24 in Springfield. At hearing on April 23, the Agency introduced another proposal for the Board's consideration, referred to as the Alternative Generic Proposal. (Alternative Proposal). The Agency has recommended that the Board adopt the Alternative Proposal rather than the original proposal or its two revisions. (R. 851). Additionally, the Illinois Environmental Regulatory Group (IERG) filed its own proposal at hearing on February 11, 1987. (R. 613). IERG later withdrew that proposal and submitted a modified version of the Agency's Alternative Proposal at hearing on April 23. (R. 986).

At hearing on April 24, 1987, IERG requested an additional hearing to resolve a controversy between the Agency and Dow Chemical (Dow) concerning the proposed rule's applicability to Dow. A hearing was set for June 18. Subsequently, IERG, Dow, and the Agency resolved their dispute, and as a result the three filed a Joint Motion to Amend the Agency's Alternative Generic Proposal and IERG's Version of the Alternative Proposal on June 16, 1987. The amendment essentially removes Dow from the proposed rule's applicability. As a consequence, the June 18 hearing was cancelled.

The Board held a total of seven merit hearings prior to adopting the Agency's Alternative Proposal for First Notice. These hearings generated a hearing record with 59 exhibits and a written transcript containing more than 1200 pages. On August 6,

1987, the Board adopted the Agency's Alternative Proposal. In its Opinion, the Board explained its rationale behind the First Notice Adoption.

Certain deadlines imposed by the Clean Air Act require that the Board quickly reach a final disposition of this matter. If the Board were to adopt as final the Agency's Alternative Proposal, the owners and operators of emission sources subject to the rule would have to be in compliance with the rules by December 31, 1987, according to the rule's provisions. The Board views this as a very tight time frame within which the affected owners and operators might have to act, particularly given that a number of time-consuming procedural steps are yet to be undertaken before final disposition. Most participants to this proceeding have no major objections to the Alternative Proposal.

Accordingly, the Board adopts the Agency's Alternative Proposal for First Notice. In taking this action, the Board believes that whatever the outcome, final disposition of this matter will proceed in as timely a fashion as possible. The Board cautions that this action in no way constitutes a determination by the Board on the ultimate merits of the proposed rules.

* * *

In addition, since the Board is proposing this rule for First Notice, any person may present their views and comments concerning the proposed rule or request a public hearing pursuant to the procedures of Section 5.01 of the Illinois Administrative Procedure Act. Ill. Rev. Stat. 1986 Supp., ch. 127, par 1005.01.

(R 86-18, slip op. at 4,
August 6, 1987)

The Alternative Proposal was published in the Illinois Register on August 28, 1987. Consequently, First Notice comments were due to be filed by October 14, 1987.

On November 2, 1987, the Department of Energy and Natural Resources (DENR) filed an Economic Impact Study (EcIS). Pursuant to Section 27(b) of the Illinois Environmental Protection Act, the Board held two hearings on the EcIS. The first EcIS hearing

was held in Springfield on December 14, 1987 and the second EcIS hearing was held on December 18th in Chicago. The record generated by these EcIS hearings includes 16 exhibits and a transcript totaling over 300 pages. Comments on this EcIS hearings were due to be filed on January 11, 1988.

On February 4, 1988, the Board adopted a proposed rule for Second Notice. The Second Notice period began on February 17, 1988 and ended on April 4, 1988. On February 29, 1988, the Board received a request from the Joint Committee on Administrative Rules (JCAR) to extend the Second Notice period because JCAR would not consider the Board's proposed rule until its April 12, 1988 meeting. In a letter dated March 4, 1988, the Board informed JCAR that upon advise of the Attorney General, it declined to extend the Second Notice period. The Attorney General who is representing the interests of Illinois in State of Wisconsin v. Lee M. Thomas, Administrator, United States Environmental Protection Agency (Civil No. 87-C-0395, United States District Court for the Eastern District of Wisconsin) strongly advised the Board to enact and file this rule as soon as possible. A consent decree is in the process of being negotiated and entered and any deviation from the dates put forth in it would be taken as evidence of bad faith by the State of Wisconsin. A federal judge could impose such sanctions upon Illinois as impoundment of highway or sewage plant construction grant funds or require tighter controls on Illinois industry or other remedies. Thus it is to the benefit of Illinois to enact and file these rules quickly.

The Board also informed JCAR that to the extent possible, it would make changes in accordance with JCAR staff recommendations. The Board has made several non-substantive changes to the proposed rule which were requested by JCAR staff. There was only one JCAR staff request that the Board was unable to grant; the Board has declined to add the phrase "by a preponderance of the evidence," to Section 215.263.

Alternative Proposal

The Alternative Proposal differs significantly from the earlier Agency proposals in its structure but not in its control requirements. The earlier proposals provided a blanket coverage for the rule's applicability with specifically listed exemptions. The newer Alternative Proposal specifies four areas of the rule's applicability. Presumably, a source that does not fall under one of these categories would not be subject to the rule.

In general, the Alternative Proposal would impose controls on specified types of manufacturing process emission sources at a plant if those emissions sources as a group would emit 100 tons or more of VOM per year, if no air pollution control equipment were used, and these emission sources are not already subject to a control technique guideline (CTG) based rules.

The Alternative Proposal requires that RACT be utilized by the sources subject to the rule. The four areas of applicability, proposed as Subparts AA, PP, QQ, RR and the RACT requirements for each are as follows:

<u>Area of Applicability</u>	<u>RACT Requirements</u>
1) Paint and Ink Manufacturing (Proposed Subpart AA)	Various operation, maintenance and monitoring requirements; no quantified emission reduction.
2) Miscellaneous Fabricated Product Manufacturing Processes (Proposed Subpart PP)	81% reduction in uncontrolled VOM emissions; for coating lines, VOM emissions not to exceed 0.42 kg/l (3.5 lb/gal) of coating applied.
3) Miscellaneous Formulation Manufacturing Processes (Proposed Subpart QQ)	81% reduction in uncontrolled VOM emissions.
4) Miscellaneous Organic Chemical Manufacturing Processes. (Proposed Subpart RR).	81% reduction in uncontrolled VOM emissions.

As an alternative to the control requirements of proposed Subparts PP, QQ, and RR, sources may comply with the rule by being subject to an adjusted RACT limitation as determined by the Board. The adjusted RACT limitation procedure is set forth in Subpart I of the Alternative Proposal. Generally, under this procedure, owners and operators would have to make a showing before the Board that the relevant control requirements as specified in Subparts PP, QQ, RR are not RACT for that particular source and that a different control requirement is RACT for that particular source.

Motions

The Board finds it useful to reiterate its position with regard to certain motions that the Board disposed of by its First Notice Opinion. At hearing on April 24, 1987, IERG orally moved for more hearings in this matter or, in the alternative, to establish a separate docket so that two issues could be explored further. The issues were whether the counties of McHenry, Kane, DuPage and Will should be included in the proposed generic rule's area of applicability and whether it is proper to base a rule for the control of hydrocarbon emissions on the EKMA model. (R. 1115-1116). IERG agreed to submit the motion in writing to the Board so the Agency could likewise respond in writing. (R. 1120).

On May 27, 1987, the Agency filed a Motion to Close the Merit Record. In its motion, the Agency stated that since IERG had, at that point, not yet filed its written motion as promised at the April 24 hearing, IERG's motion should be denied. The Agency requested that a date closing the record be set because further delay would "jeopardize the needed timely progression of this regulation".

On May 29, 1987, IERG filed an Objection to the Agency's Motion to Close the Merit Record as well as a Motion to Establish a Separate Docket, which was the written follow-up to IERG's oral motion at the April 24th hearing. In its Objection, IERG stated that it needed to wait until transcripts of the April hearings became available before it could submit a written motion as promised at hearing on April 24. In its written Motion to Establish a Separate Docket, IERG referred the Board to IERG's argument that it presented at the April 24 hearing when it orally requested additional hearings or a separate docket. In its written motion, IERG only requested a separate docket in order to "address the issue of the applicability of this proposed rule to McHenry, Will, Kane, and DuPage Counties and use of the EKMA model". IERG further stated that it does not intend to "delay the timely progression of the proposed generic rule; the establishment of a separate docket would allow the technical merit issue to move forward".

Allsteel, Inc. (Allsteel) filed its Response to the Agency's Motion to Close the Merit Record on June 2. Essentially, Allsteel requested that the Board not close the merit record until Allsteel filed its response to questions posed to Allsteel by the Agency at the April 24 hearing. The Board notes that Allsteel filed its response on June 19, 1987.

As a result of a June 11 conversation with counsel for the Agency, the Hearing Officer discovered that the May 29 filings of IERG and the June 2 filing of Allsteel were never served upon the Agency. The service list attached to the filings did not include the Agency. The Hearing Officer issued an order requiring that in the future, the Agency be served with all filings. The Hearing Officer supplied the Agency with Board copies of the filings at issue. At the time the Hearing Officer issued his Order, he spoke with one counsel for IERG who stated that the failure to serve the filings on the Agency was unintentional. Also, subsequent to the Order, the Hearing Officer received a letter from Allsteel stating that its failure to serve the Agency was inadvertent.

The Agency filed four motions on April 23, 1987. The first was a motion which requested leave to file the remaining three motions instant. That motion was granted. Next, the Agency moved to strike Allsteel's Response to the Agency's Motion to Close the Merit Record due to Allsteel's failure to serve its filing on the Agency. Similarly, the Agency also moved to strike

IERG's May 29 filings for failure to serve the Agency. Finally, the Agency filed its Response to IERG's Motion to Establish a Separate Docket, the substance of which will be discussed later.

Allsteel filed a Response to the Agency's Motion to Strike on June 25, 1987. IERG also filed a Response on July 9, 1987. Generally, both Allsteel and IERG assert that the failure to serve the Agency was unintentional and that their respective filings should not be stricken.

Since the Board in its First Notice Opinion set a date for the close of the merit record, the Agency's Motion to Close the Record was considered moot. Similarly, IERG's Response and Allsteel's Response to the Agency's Motion to Close the Merit Record, the Agency's motions to strike those responses for failing to serve the Agency, and IERG's and Allsteel's Responses to the Agency's motions to strike the responses were found moot. Agency's Motion to Strike IERG's Motion for a Separate Docket due to IERG's failure to serve the Agency was denied. The Board shares the Hearing Officer's view, as stated in his June 11 Order, that it is reasonable to expect that the proponent of a rulemaking be served with motions. However, in this instance it appeared that IERG's failure to serve the Agency was inadvertant. The Agency eventually received the IERG's motion and was given an opportunity to file a response. As a result, the Board did not find it necessary to strike IERG's motion. Instead, the Board decided IERG's Motion to Establish a Separate Docket and the Agency's response on their merits.

IERG's Motion to Establish a Separate Docket was based upon the position that the record contains sufficient information to warrant further investigation of the issues of whether the proposed generic rule should apply to McHenry, Will, Kane, and DuPage counties and whether it is proper to use the EKMA model as a basis for the proposed rule. IERG referred the Board to the arguments that it presented at the April 24 hearing in support of its motion.

With regard to the county issue, IERG stated at hearing,

With respect to McHenry and Will, it is clear those are not presently designated as attainment* counties. With respect to Kane and DuPage counties, we believe that USEPA is under an obligation to move forward with rulemaking under the Seventh Circuit decision and it would be improper to be adopted [sic] regulations imposing RACT since USEPA has, in

* The Board notes that counsel for IERG likely meant to say "nonattainment".

effect, forwarded the mandate of the Seventh Circuit.

(R. 1115-1116)

The Agency responded by stating that the county issue has already been sufficiently addressed in this proceeding at the October 29, 1986 hearing and IERG has had the opportunity to respond to that evidence in this proceeding. Consequently, the Agency concluded that further hearings on that issue were unnecessary. In addition, the Agency referred to Exhibit 34 which is a letter, dated April 14, 1987, from Mr. Steve Rothblatt, Chief of the Air and Radiation Branch, of the United States Environmental Protection Agency (U.S. EPA) to Mr. Michael Hayes, Manager of the Division of Air Pollution Control for the Agency. In that letter, Mr. Rothblatt writes,

DuPage and Kane counties clearly cannot be excluded from the Chicago area EKMA demonstration, since they are designated nonattainment and are integral parts of the Chicago area. While Will and McHenry Counties are no longer classified as nonattainment, omitting these counties from RACT requirements would require substantial justification and it is doubtful that such a justification would be successful. In order to exclude these counties from the EKMA demonstration, it is likely that (1) additional controls would be necessary in the nonattaining counties and (2) USEPA would have to be convinced that emissions in these counties do not contribute to the emissions that lead to the violations of the ozone standard found in and downwind of the Chicago area. In addition, it would be necessary for the State to prepare, adopt, and submit a new SIP revision which includes a new EKMA analysis of necessary emission reductions and which achieves the necessary emission reductions in the four county (Cook, DuPage, Kane, and Lake Counties) area....

Please be aware that unless and until such a SIP revision were approved, the Chicago demonstration area continues to include Will and McHenry Counties as well as Cook, DuPage, Kane and Lake Counties, and failure to adopt RACT in all six counties could result in imposition of a variety of sanctions.

(R86-18, Exh. #33, p. 2)

With respect to the county issue, the Board is persuaded by the Agency's position.

Secondly, IERG asserted that testimony of Mr. Erwin Kauper, presented at the April 24 hearing raises questions regarding "the use of the EKMA Model as it relates to the necessity for control -- for additional control of hydrocarbon emissions, irrespective of the area where those emissions are located." (R. 1116). In response, the Agency states that the

use of the EKMA model is consistent not only with the opinions of the Board for the last eight years, but also the efforts of the Agency and numerous industrial representatives....If the EKMA model was deemed inappropriate, not only would Illinois require a new attainment demonstration and a new SIP but also revised promulgated RACT regulations and proposed RACT regulations.

(Agency Response, p. 3)

The Board agrees with the Agency that it would be inappropriate to question the use of the EKMA model at this point in the RACT regulatory process.

Although IERG's stated that its intent was "not to delay the timely progression of the proposed generic rule," the Board is at a loss to determine how the opening of a separate docket, to consider issues that are integral to the proposed generic rule, would not further impact or delay this proceeding. As stated earlier, the Board recognizes the importance in proceeding as expeditiously as possible in this matter. Even if the Board assumes that IERG's position is correct, such issues would be fundamental not only to the proposed generic rule but also to all the RACT proceedings. At this point, the Board sees no reason to investigate, through a separate docket, the foundation for all the RACT rules. Such an endeavor would only delay the needed progression of the RACT rulemaking process. For the above reasons, the Board denied IERG's Motion to Establish a Separate Docket. The Board notes that IERG, like any other person, is free to present to the Board a regulatory proposal pursuant to Section 28 of the Act.

VOM Definition

On March 19, 1987 the Hearing Officer in this Proceeding and the Hearing Officer in R86-37, Definition of Volatile Organic Material, Section 215.104, issued a Joint Order giving guidance concerning the Agency's proposed new definition of VOM in R86-37 and the resulting impact upon the regulated community if this new definition were applied through the proposed generic rule. The Joint Order stated that it was "most appropriate to address the

potential increased impact under the Generic VOM Rule caused by the expanded definition of VOM in the R86-18 docket." The Joint Order further stated:

In order to ensure that the regulated community has adequate notice of the proposed redefinition of VOM in the Generic VOM proceeding, the hearing officers request the Agency amend its R86-18 proposal to show the proposed redefinition of VOM contemplated in R86-37.

As a result, when the Agency submitted its Alternative Proposal, a definition for VOM, that was consistent with the Agency's proposal in R86-37, was included. The Board adopted a new definition of VOM as final on December 22, 1987. 12 Ill. Reg. 787, 815.

Although the version of the Alternative Proposal that the Agency filed with the Board contains a definition for VOM, the version of the Alternative Proposal that the Board is adopting today does not contain a definition of VOM. According to the Hearing Officers' Joint Order, the definition of VOM to be included in the Agency's proposal in the R86-18 docket was to be included for the sole purpose of notifying the public of the potential impact that the VOM definition proposal in R86-37 might have upon the proposed generic rule's scope of applicability. The R86-18 docket was to receive evidence concerning that impact not the propriety of the VOM definition itself. The latter issue was to be addressed in the R86-37 docket. It naturally follows that the record in R86-18 was not developed for the purpose of justifying the new VOM definition, but rather applicability and control requirements of the proposed generic rule. The version of the Alternative Proposal adopted for today merely reflects that fact. The definition of VOM adopted in R86-37 applies.

In addition, the Board has made some minor changes in the wording of the Alternative Proposal. In particular, the Board has changed the wording of Section 215.261(c)(2). The Board believes it has not changed the substance of that provision but merely clarified the wording. The Agency has agreed to this change. (P.C. #6, p. 66).

Subpart AA -- Paint and Ink Manufacturing

In Subpart AA, the Agency has proposed to regulate emissions from certain paint and ink manufacturing plants. The Agency states that several other jurisdictions regulate such operations; specifically, the Agency points to Maryland, Michigan, Wisconsin, the Bay Area and South Coast Air Management Districts of California, and Jefferson County in Alabama as being jurisdictions where such regulation of paint and ink manufacturing plants exist or are pending. The Agency has

reviewed the requirements of these jurisdictions and has incorporated the most stringent regulatory provisions from each of these jurisdictions into the proposed Subpart AA. In general, Subpart AA does the following:

- 1) Has applicability determined by either major non-CTG emissions (emissions of 100 tons or more per year of VOM if no air pollution control devices were used) or solvent paint and ink production exceeding a certain throughput (2,000,000 gallons per year of paint and ink formulations);
- 2) Exempts production of water-based paints and heat-set, off-set ink from control requirements;
- 3) Requires properly operated lids on mixers;
- 4) Requires properly operated grinding mills and enclosure on new mills;
- 5) Requires systematic detection and repair of leaks;
- 6) Requires operating practices to minimize solvent losses during cleaning;
- 7) Requires practices which minimize loss of waste solvents.

(April 23, 1987 R. 872-873).

The Agency asserts that it cannot justify the control of operations which manufacture entirely water-based materials or heat-set, off-set ink oils because such operations would not emit VOM. Consequently, the Agency in Subpart AA has made a distinction between these types of materials which would not be regulated and others which would. Also, the term "McGee Oil" which was included in the alternative proposal published for First Notice should in fact be spelled "Magie." Evidently, this material is an oil solvent which boils at temperatures in excess of 450 F and which has minimal vapor pressure at ambient temperatures. (April 23, 1987, R. 874-875). The Agency has proposed a production level of applicability of 2,000,000 gallons per year or more. This figure was arrived at so that all the facilities which the Agency has identified in its inventory would be included under the applicability of this Subpart. (April 23, 1987, R. 874). The Agency has also proposed a 12 gallon exemption for an open top mill tank, vat, or vessel. That is, such containers with a volume of less than 12 gallons would not have to be regulated. This level of exemption was chosen because the California rules indicate that this is the lowest volume vessel for which lids are appropriate. (April 23, 1987, R. 875).

The Agency states that the rules promulgated in other jurisdictions (the Michigan rule is only pending) established "a strong precedent for RACT" for the operations as specified by

Subpart AA. The Agency states that "to ignore this precedent and not subject these Illinois operations to generic emission limits would logically risk USEPA disapproval of that portion of the Agency's proposed rule." The Agency also concludes that the requirements under Subpart AA are technically feasible and economically reasonable. (P.C. #6, p. 13). The Board notes that no opposing testimony from any paint and ink manufacturer was presented at hearing.

Subpart PP -- Miscellaneous Fabricated Product Manufacturing Processes

In Subpart PP, the Agency has proposed to regulate manufacturing processes which involve various applications, including any drying and curing, of certain formulations. These processes must be capable of emitting VOM. Although the version of the Alternative Proposal which was published at First Notice included viscose solutions under the definition of miscellaneous fabricated product manufacturing process, the Agency has now proposed a separate subpart, Subpart OO, which would apply to viscose solution processes. Generally, Subpart PP involves the application of adhesives and coatings to various items. Also, the process in which plastic foam, scrap or "fluff" from the manufacture of foam containers and packaging materials are used to form resin pellets are included under Subpart PP. Subpart PP also would apply to the storage and handling of formulations as well as to the use and handling of organic liquids and substances used for the clean up operations associated with the applicable processes.

As a result of negotiations between the Agency, Dow Chemical USA and the Illinois Environmental Regulatory Group, the Agency and IERG proposed a change to the original Alternative Proposal. The change included removing processes dealing with the production of insulation board from applicability under Subpart PP. The Board allowed the Agency to amend its proposal in this manner and this amendment was reflected in the version of the Alternative Proposal which was published in the Illinois Register. This amendment effectively removes Dow from regulation by the generic rule.

With regard to adhesives, the Agency states that the VOM content of adhesives varies from 5.9 pounds per gallon, for spiral tubes used for electric motor components, to zero pounds per gallon, for an adhesive formulated with exempt compounds used on foam. Subpart PP would impose a 3.5 pound per gallon limit for VOM content. The Agency asserts that such a limit is "a reasonable level at which to set a normative limit in a rule....It is at the lower end of the range for volatile organic material content for adhesives a general applicability ignoring the specialized adhesives at zero and 0.5 pounds per gallon. Setting the normative limit at 3.5 pounds per gallon enables substantial reductions in organic emissions were feasible from

the level with the adhesives at the upper end of the range." (October 29, 1986, R. 396-397). The Agency then points to the adjusted RACT provision of the rule in order to accommodate higher VOM content adhesives. "A limit of 3.5 pounds per gallon requires the site-specific demonstration necessary for the setting of adjusted RACT emission limitation to accompany continued major uses of higher VOM content adhesives". (October 29, 1986, R. 397). The Agency also concludes that the 3.5 pounds per gallon limit is "a fair balance of technical, environmental, and procedural concerns". Id. The Agency also comes to a similar conclusion concerning the regulation of coatings applied to plastic products. "Adoption of an emission limit of 3.5 pounds organic emissions per gallon of coating with provisions for administratively setting an adjusted RACT emission limitation is a crude but effective way to deal with the category. It balances technical, environmental, legal, administrative, and practical concerns to a reasonable end." (October 29, 1986, R. 409).

The Agency also asserts that an 81 percent reduction in VOM emissions from uncontrolled levels is justified for processes using the baths of organic solvent in which is dispersed resin, rubber or other materials. This conclusion is reached from the observation that there is currently "a prevalence of control equipment for these operations". (P.C. #6, p. 19; February 11, 1987, R. 828-829). The Agency states that this fact is "ample demonstration of the technical feasibility and economic reasonableness of the proposed generic rule" as applied to resin these application processes. (P.C. #6, p. 19).

According to the Agency, the coating of leather is a non-CTG operation which is regulated by at least one other jurisdiction. Apparently, New Jersey imposes an emission limit of 5.8 pounds of volatile organic substances per gallon of coating. At hearing, the Agency stated "background information on the New Jersey Department of Environmental Protection's Action may also be useful to the extent that it will be relevant to a determination of an adjusted RACT emission limitation for the non-complying operation." (February 11, 1987, R. 842).

As stated earlier, the Agency amended the applicability of Subpart PP so as to effectively eliminate Dow Chemical USA, a manufacturer of foam boards, from regulation under Subpart PP. However, Subpart PP would apply to processes which involve the use of plastic foam scrap, or "fluff" from the manufacture of foam containers and packaging material to form resin pellets. It is clear from the record that this would include the processes conducted by Mobil Chemical Corporation as it reclaims scrap foam from its manufacturing process. Specifically, Mobil manufactures polystyrene foam sheets for food packaging containers including egg cartons, meat trays, food service disposables, and fast food sandwich containers. (February 11, 1987, R. 669). The amount of emissions resulting from the reclaiming process totals 476 tons per year of VOM for Mobil's Frankfurt plant. (February 11, 1987, R. 675).

Mobil has also presented estimates that the control of the fluff bins in the reclaim process through incineration would generate a cost effectiveness of \$3,500 per ton of VOM removed. A similar estimate of \$3,600 per ton would result from the use of a carbon adsorption process. (Exhibit 28A). On the other hand, the Agency calculates the estimate of cost per ton removed at \$2,600 (P.C. #6, att. 12). The Agency concludes that catalytic incineration or high thermal efficiency incineration is technically feasible and economically reasonable for Mobil's process emissions from the fluff bins and reclaim extruders. (P.C. #6, p. 35).

The Application of Adhesives by Allsteel, Inc.

Representatives of Allsteel, Inc. (Allsteel) testified at the April 24, 1987 hearing as well as the December 18, 1987 EcIS hearing. After reviewing Allsteel's April 24th testimony and subsequent submissions by Allsteel, the Agency has concluded that Allsteel has demonstrated that RACT is presently utilized for almost all of Allsteel's emission points. Consequently, the Agency is recommending that adhesive operations as included under Subpart PP be restricted to non-furniture adhesives. Allsteel is in the business of manufacturing various types of office furniture.

Also the Agency recommends that the curing of furniture adhesives in ovens be subject to Subpart PP to the extent that such a curing operation emits an excess of 10 tons of VOM per year. (P.C. #6, p. 43). The Agency's rationale behind the 10 ton per year cutoff is as follows: "The Agency has arbitrarily selected 10 ton/year emissions as the point of demarkation at this time, where control of an oven curing adhesives is reasonable. This achieves a result of keeping Allsteel's emission point 2 [largest curing operations] subject to limitation. This is the emission point that is most amenable to control with a single control device minimizing interaction with retrofit constraints and multisource duct work." (P.C. #6, p. 42).

In response, Allsteel states that it agrees with the Agency's position that the generic rule should exclude adhesive application processes in furniture manufacturing operations. However, Allsteel disagrees with the Agency concerning the control of Allsteel's desk top line curing ovens. Allsteel claims that it has conducted emission tests on three of its ovens and discovered that even the largest oven only emits approximately 11.2 tons/year. This is in contrast to the 27 tons/year figure which was earlier assumed by Allsteel and the Agency. According to Allsteel, control of that oven would only result in the reduction of 10.4 tons/year. (December 18, 1987, p. R. 1037, P.C. #10, p. 3). Allsteel also states that the \$5,000 per ton removed estimate, as calculated by the DENR EcIS, is too

low. Allsteel believes that the cost of control of its curing oven would be higher primarily due to construction problems with the space constraints found in Allsteel's plant. (December 18, 1987, R. 1045-1046). Allsteel states that it would have to install an incinerator weighing between 25,000 to 30,000 pounds on the plant's roof. In addition, the incinerator would have to be located near the center of the building, which would, according to Allsteel, require further structural improvements in order to achieve the proper roof support. Allsteel claims that all these contingencies would greatly increase the cost of the incinerator. (December 18, 1987, R. 1039 - 1040).

After reviewing Allsteel's data presented at the EcIS hearing, the Agency concludes that an installation of an afterburner outside the building would be too costly to justify the control of only 24.2 tons/year of Allsteel. (P.C. #15, p. 16). However, the Agency suggests that the installation of control equipment within the building if feasible would be the most economical control option for Allsteel. The Agency also concludes that the record does not support a finding that there is insufficient space on the inside of Allsteel's plant to install control equipment. The Agency suggests that the stacking of an incinerator on top of the oven could be feasible for Allsteel. Allsteel responds in its comments that there is no room within the plant to install incinerators. (P.C. #19, p. 4). Specifically, Allsteel's witness testified at hearing that there was not enough room to install an incinerator directly above the oven because of the mezzanine floor located directly above the oven. Also, there would not be enough room between the mezzanine area and the roof, according to Allsteel's witness. (December 18, 1987, R. 1055-1056). The witness categorically stated that there was no way that an afterburner could be installed within the building (December 18, 1987, R. 1057).

The Agency has fashioned regulation of furniture curing ovens, specifically requesting a 10-ton cutoff so that Allsteel's curing ovens would be subject to this rule. (P.C. #6, p. 3, 43). In the Agency's comments after the EcIS hearing, the Agency takes the position that Allsteel's curing ovens should be regulated due to the absence of the showing that it is technically infeasible or economically unreasonable for Allsteel to install afterburners inside the plant. The Agency has come to the conclusion that it is economically unreasonable for Allsteel to install afterburners outside the plant. (P.C. #15, p. 18).

Allsteel is currently running its plant on one shift. It claims that the 11.2 tons per year emission level is typical at such a level of operation. (December 18, 1987, R. 1068-1069). Allsteel indicated that if production levels increase, it would add more equipment rather than utilize a second and third shift. Id.

The Board is reluctant to exempt Allsteel completely from the generic rule requirements as requested by Allsteel. Although Allsteel's emissions are presently relatively small, an increase in Allsteel's production could significantly increase its yearly emission levels. The Agency has proposed a 10-ton or less exemption which would apply to Allsteel's curing ovens. According to the Agency, the purpose behind this provision is to include Allsteel's largest curing oven emission source under the generic rule's limitations. The issue then becomes whether an 81 percent reduction is RACT. The determination of RACT for Allsteel's curing oven processes involves site-specific considerations unique to Allsteel. The Board finds that if Allsteel cannot reasonably comply with the limitation of the generic rule, Allsteel should utilize the adjusted RACT provision. This procedure would allow the Board to extensively consider Allsteel's particular situation. Given the current state of the record before the Board, the Board is unable to make such a site-specific examination of Allsteel's curing oven process in this proceeding. However, the Board agrees with the Agency that furniture curing processes emitting less than 10 tons per year should be exempt from the rule.

Allsteel Motion

On March 30, 1988, Allsteel, Inc. (Allsteel) filed a Motion for Correction. In its motion, Allsteel asserts that there is an "apparent error" in the Board's Second Notice Order. In short, Allsteel claims that the Agency only proposed that Allsteel's curing ovens, used for the desk-top line, be regulated by the rule. It is Allsteel's position that its parcel slab curing ovens may also be subject to the proposed rule.

The language at issue involves the definitions of "Miscellaneous Fabricated Product Manufacturing Process." Specifically, as the rule is drafted, any manufacturing process which involves the "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" falls under that definition. Allsteel requests that the Board add the phrase "used for the manufacture of desktops and other similar work surface tops" in order to exempt Allsteel's panel slab line curing ovens from the rule. According to Allsteel, this change would "represent the intent of the Agency and what is believed to be the intent of the Board."

The Agency filed a response to Allsteel's motion on April 5, 1988. In its response, the Agency states that Allsteel misrepresents the Agency's position with regard to the issue of curing ovens. It is not the position of the Agency that the Board made an inadvertant mistake. The Agency asserts that it stands by its previous comments, which had requested the language that the Board proposed for Second Notice (P.C. #6, p. 3, 43). In addition, the Agency cites the Board's own Second Notice proposed Opinion which states:

Given the current state of the record before the Board, the Board is unable to make such a site specific examination of Allsteel's curing oven process in this proceeding.

The Agency states that the Adjusted RACT proceeding is available for Allsteel to utilize in order to address Allsteel's particular concerns regarding the panel slab manufacturing line. In fact, the Agency points out that Allsteel has already met with the Agency in order to expedite any future Adjusted RACT determination.

As the Agency pointed out, the Board had no intention of tailoring a general rule to the precise site-specific conditions encountered by Allsteel. The ten-ton cut-off was chosen in order for the generic rule to apply to any relatively large furniture curing oven emission source. The Board expressly noted in its Second Notice proposed Opinion and re-asserts in today's final Opinion that if Allsteel has particular problems with the control requirements imposed by the generic rule, it may petition the Board for an alternative controls via the generic rule's Adjusted RACT procedure. The Board hereby denies Allsteel's motion.

Subpart QQ -- Miscellaneous Formulation Manufacturing Processes

This Subpart regulates the manufacturing processes which compound various materials and are also capable of emitting VOM. Also included is the regulation of the storage and handling of various formulations associated with the process as well as the use and handling of organic liquids and other substances for the clean-up operations associated with the processes. These processes include the formulation or manufacture of caulks, sealant, concrete additives, adhesives, and viscose solutions which will be discussed later. Also, this Subpart would regulate the manufacture of friction composite materials which utilize formulations containing rubber, resins, fibers and fillers in which an organic solvent is a minor component.

The Agency states that the regulation of the manufacturing of adhesives is justified for a number of reasons. Such a manufacturing operation can be considered under the broader category of processing chemicals and vessels. Such a category of manufacturing operations is regulated by other state and local authorities outside of Illinois. Specifically such regulations apply to the manufacture of coatings, paints, and polymer resins. Also the Agency claims that some sources already have control devices, which would be required under the generic rule, that might render these sources already in compliance with the Agency's proposal. (October 29, 1986, R. 388-389; February 11, 1987, R. 824).

At hearing, the Agency also explained its justification for the imposition of controls on the manufacture of composite friction material. Such material is generally made by impregnating felt paper with a solution of resin and organic solvent. The Agency specifically estimates that the cost of afterburners on existing lines is in the range of \$1,000 per ton removed, and for newer lines the cost is approximately \$250 per ton removed. (October 29, 1986, R. 392-393) (February 11, 1987, R. 828-829).

In its First Notice comments, the Agency is also recommending that the exemption level per emission source for Subpart QQ be raised to 2.5 tons per year rather than one ton per year. The Agency claims that such a change would assure that RACT would be implemented for the manufacture of adhesive and related products. (P.C. #6, p. 15).

Subpart RR -- Miscellaneous Organic Chemical Manufacturing Processes

Subpart RR would regulate manufacturing processes capable of emitting volatile organic materials which produce by chemical reaction various organic compounds or mixtures of such organic compounds. Also regulated by this Subpart would be the storage and handling of formulations associated with these various processes and the use and handling of organic liquids and other substances for the clean up operations associated with these processes. The Agency asserts that the uncontrolled emissions, excluding the de minimus exemptions provided by this Subpart, amount to approximately 385 tons/year. Reductions achieved by this proposed Subpart would range from 312 to 365 tons per year, according to the Agency. (P.C. #6, p. 7-8). The Agency claims that control of emissions from these processes can be realized in a technically feasible and economically reasonable way. Specifically, the Agency states that control of these sources can either be accomplished by a condenser or for ethyl petroleum additives, the use of smokeless flares. (Exhibit 57, p. 3-5). The cost of using smokeless flares as controls range from approximately \$25 to \$291 per ton removed. (Exhibit 57, p. 6-12, Appendix A, Table 2A). As for condensers, the cost effectiveness ranges from a savings of \$445 per ton to a cost of \$1170 per ton reduced. (Exhibit 57, p. 6-12, Appendix A, Table 2A). The Agency also states that California and Wisconsin have also promulgated rules for resin and polymer manufacturing facilities. (P.C. #6, p. 7; October 29, 1987, R. 284-287, Exhibits 6(b) and 6(c)).

Control of Sources at Stepan Chemical Company

In its First Notice comments, Stepan stated that absent a low vapor cutoff and a larger total emissions allowance, Stepan would be required to implement very costly controls upon its sources. Specifically, Stepan would like that the exemption provision of Proposed Section 215.960(d)(1) be expanded to allow

for the small source exemptions to add up to 25 tons per year. The current proposal provides for small source exemptions (sources which emit less than 1 ton per year) to a total of 5 tons per year. Stepan also proposes that VOM with vapor pressures of less than 0.02 PSIA be exempt from regulations.

The first time that Stepan testified at hearing in this matter was on the last day of the EcIS hearings, December 18, 1987. At that point, the Agency objected to Stepan's testimony on the grounds that the information Stepan was supplying was coming in too late in the rulemaking process. In addition, the Agency objected to Stepan's testimony in that the nature of the testimony was conclusory and that the testimony did not supply specifics with regard to the operations and emissions of Stepan. (December 18, 1987, R. 1072-1073). The Agency concluded that even if this information had been supplied by Stepan at the time of the hearing, the Agency would not have enough time in this rulemaking process to review the substance of Stepan's assertions. (December 18, 1987, R. 1076).

Stepan responded by stating that it had prefiled its testimony according to the Hearing Officer's Order and that the Agency was given plenty of opportunity to request any additional information prior to the EcIS hearing. The Hearing Officer allowed Stepan to present its testimony since it had complied with the Hearing Officer's Order requesting the prefiling of testimony. (December 18, 1987, R. 1075).

Stepan is "a manufacturer of basic and intermediate chemicals used primarily in the soap and detergent industry." (December 18, 1987, R. 1079). In its testimony, Stepan suggests that it has many smaller sources which would have to be regulated under the proposed rule and that such regulation of these sources would prove technically infeasible and economically unreasonable. (December 18, 1987, R. 1080). Stepan also questioned the Agency's assertion that condensers would provide a 95 percent control efficiency. Stepan stated that such control efficiency would amount to more or less 50 percent. (December 18, 1987, R. 1082). Stepan also states that it believes that approximately 30 sources -- many of which emit under 1 ton per year of VOM would be subject to the requirements of Subpart RR. (December 18, 1987, R. 1080). Stepan estimates that control using a condenser for its largest sources would amount to \$8,700 per ton. Other sources which emit more than 1 ton per year could have a control cost effectiveness of up to \$20,000 per ton.

A Stepan witness at hearing stated that he first really became aware of the generic proposal at about the time of the last merit hearing which was held on April 24, 1987. He states that at that point he did not have enough time to prepare testimony for the hearing on April 24th. (December 18, 1987, p. 1096).

In general, the Board is in agreement with the position of the Agency concerning the timing of the submission of Stepan's materials. Such information should have been submitted during the merit hearing process. Stepan claims that it was not aware of the Agency's proposal until approximately the last merit hearing, which was held on April 24, 1987. However, as pointed out by the Board's First Notice Opinion, any person could have followed the procedure prescribed by the Illinois Administrative Procedure Act and requested a merit hearing after the August 28, 1987 First Notice publication of the Agency's Alternative Proposal in the Illinois Register. Stepan did not do so but rather chose to testify at the EcIS hearing and submit the majority of its substantive materials in its comments following the EcIS hearing. The Board notes that it is required under Section 27(b) of the Act to hold hearings on an EcIS filed by the Department of Energy and Natural Resources. In general, it is a policy of the Board to limit the scope of those hearings to commenting upon the EcIS generated by DENR. Substantive positions by the regulated community concerning the rule, in general, should be introduced during the merit hearing process -- not during the EcIS hearings. The Board recognizes that often issues do overlap into the area of economics covered, or perhaps not covered, by the EcIS which could properly be considered merit issues. Notwithstanding this fact, the Board views Stepan's posture in this proceeding as being somewhat untimely.

Hearings in this matter have been going on since October of 1986. The Board has considered that the RACT rules must be promulgated as expeditiously as possible. Consequently, the Board is faced with having to determine an ending point for when information can be introduced into the record. The Board has allowed Stepan to introduce its information; however, it is obvious that the information coming in at this point in the rulemaking process does not allow the Board or other interested persons a significant opportunity to review and scrutinize the substantive positions of Stepan. As a result, the Board believes that Stepan should make its case by utilizing the adjusted RACT provision as provided by this rule. This will allow Stepan to present all the necessary information for Board scrutiny. Consequently, the Board will not modify Subpart RR as requested by Stepan in its First Notice comments, testimony, and EcIS hearing comments.

Proposal by the Illinois Environmental Regulatory Group

On October 23, 1987, the Illinois Environmental Regulatory Group (IERG) filed a Motion for Leave to File Its Comments Instantly. That motion is hereby granted. IERG specifically states in their comments that many of the issues of concern to IERG members were addressed in the Alternative Proposal filed by the Agency. However, according to IERG, the remaining issues of concern are contained in IERG's comments. In general, IERG believes that the Alternative Proposal is a substantial

improvement in the regulatory approach to the control of non-CTG sources when compared to the proposal originally filed by the Agency. IERG also states that many of its own suggestions were incorporated by the Agency in this Alternative Proposal. (P.C. #11, p. 2-3).

Sources Counted for the 100-Ton Per Year Base Line

IERG's first major recommendation is that sources counted toward the applicability baseline of 100 ton or more of uncontrolled emissions should include only those sources which would be regulated by the proposed Subparts. As the proposal stands now, the Agency is recommending that sources not already subject to CTG based rules, whether regulated by the new subparts or not, should be counted toward the 100 ton base-line.

Also, IERG proposes that sources which are currently controlled under Section 215.302 and 215.304 of Subpart K should be exempted from the count to 100 tons. IERG states that Subpart F and Subpart N regulations, which are exempt from the 100 ton count, are not based on a CTG and that Subpart B regulations are based merely on a draft CTG. IERG's conclusion regarding these subparts is based upon testimony by an Agency witness. (April 23, 1987, R. 894-896). IERG then reasons that since there are some exemptions of sources (from the counting to the 100 ton base-line) due to the sources being subject to regulations not based on CTG's, then the inclusion of an exemption for Sections 215.302 and 215.304 Subpart K is reasonable. (P.C. #11, p. 5). However, the Agency does not agree.

The same Agency witness suggested at hearing that such an inclusion might further weaken approvability of the generic rule by the USEPA, particularly because Subpart K is also not based on a CTG. (April 23, 1987, R. 896-897). IERG generally is stating that there is no precedent to count (toward the 100 ton base-line) source emissions from sources which are not subject to the proposed limitations. The Agency counters by stating that such a counting is consistent with the regulatory approach of Part 203 and 40 C.F.R. 52.21, which identifies a source as an entire plant or modification of a plant. (P.C. #6, p. 51). The Agency also states that guidance from USEPA distinguishes between CTG and non-CTG operations at a plant and that applicability is based upon non-CTG emissions from the plant. (P.C. #6, p. 52). In addition, the Agency believes that its treatment of sources subject to Subpart K which would be counted toward the 100 ton base line, is more consistent than IERG's proposal which would exempt only certain sources which have implemented controls under Sections 215.302 and 215.304. (P.C. #6, p. 53-54). In summary, the Agency asserts that the emission limits imposed by the generic rule would reflect what is technically feasible or economically reasonable. This conclusion holds irrespective of whether certain sources are counted toward the general 100 ton applicability threshold. Also, the Agency states that there are

precedents for a plant-wide applicability determination. (P.C. #6, p. 51-52).

In its comments, the Agency does not address the fact that there are certain exemptions from the counting of the 100 ton base-line which involve sources that would be subject to rules that are not based on CTG's. However, testimony indicates that that aspect is a "weak point in the rules as is it is terms of USEPA approval." (April 23, 1987, R. 896). However, the Agency did state that Subpart N is a distinguishable situation since there are no major vegetable oil processing plants in any non-attainment area. Also, Subpart F, which would regulate the coating of wood furniture, was considered distinguishable, because according to the Agency witness, it would be unlikely that there would be other major non-CTG emissions also at such a facility. (April 23, 1987, R. 897-898).

IERG asserts that "the Board may determine the appropriate definition for source" for the purpose of this rule, as it applies to the Clean Air Act requirement of RACT for "existing major stationary sources." (P.C. #11, p. 5). In general, the Board is persuaded by the Agency's position that sources not subject to the proposed limitations of each Subpart should be included in the count toward the 100-ton applicability base line. The rule clearly distinguishes between sources that are counted toward the 100 ton baseline and sources whose emissions must be limited by the proposed generic rule (which are also counted). The regulation of the specific sources subject to the rule must meet the RACT standard.

The Board finds that it is reasonable to come to the conclusion that plant-wide sources including those which are not regulated by a particular Subpart can be considered in the determination as to whether a plant would be a major VOM emitter. The Agency has even included in its proposal the exemption, from the counting toward the 100 ton baseline, of sources regulated by various other non-CTG Subparts. The inclusion of these specific exemptions moves the baseline counting toward the direction desired by IERG (removal from the baseline count sources which are not regulated by the rule), although it weakens the approvability of the rule. The Board is reluctant to further jeopardize the rule's USEPA approvability by expanding the exemptions with another non-CTG based Subpart. In general, though, the exempted Subparts are Subparts which have been based upon CTG rules.

The Agency intends that if a source could be regulated by one of the Subparts of the generic rules as well as another Subpart that is not based on a CTG, such as Subpart K or Subpart C, then the Subpart with the more stringent control requirements would regulate that source. (P.C. #6, p. 61).

Finally, the Agency proposed alternate language in an attempt to clarify applicability of Subparts PP, QQ, and RR. (P.C. #6, p. 62-64). The Board has modified that alternate language. However, the list of exempted Subparts shall remain in the text of the Sections rather than being set forth in an Appendix. The Board has added Subpart V to the list. This is consistent with the Agency's desire that the list be updated. (P.C. #6, p. 61). Subpart V is a CTG-based Subpart which became effective on December 14, 1987. Stepan requests that Subpart V be included with the other exempted Subparts. (P.C. #20, p. 3).

Geographic Coverage of the Proposed Rule

Next, IERG contends that the proposed rule should not be applicable to existing sources in DuPage, Kane, McHenry, and Will Counties. (P.C. #11, p. 10). The Board notes that Allsteel and Stepan have made similar requests. (P.C. #19, p. 9; P.C. #20, p. 13). IERG asserts that the Clean Air Act requires that states adopt provisions for implementation of RACT on major sources in non-attainment areas. IERG claims that McHenry and Will Counties are designated attainment, therefore, there is no legal requirement to require RACT on facilities located in this counties. (P.C. #11, p. 10). Although IERG acknowledges the position of the USEPA, Region Five, as expressed by the Rothblatt Letter, Exhibit 34, IERG states that the letter is merely a USEPA policy position and is not indication of what USEPA can legally mandate. IERG concludes that USEPA internal policy should not carry the same weight as the applicable statute and regulations. (P.C. #11, p. 11-12).

IERG also relies on the testimony of Mr. Erwin Kauper for its conclusion regarding the geographic scope of applicability. The Board stands by its earlier expressed view of the Kauper testimony, as enunciated in R86-39 on July 16, 1987. The Kauper testimony had been incorporated into the R86-39 record. The relevant analysis of the Kauper testimony from R86-39 follows:

As noted above, the geographic coverage has been questioned in this proceeding. The only evidence presented in opposition to the Agency's proposal is contained in the Kauper material which has been incorporated by reference. Mr. Kauper concludes:

1. That the EKMA model used to demonstrate approvability of SIP submissions is flawed;
2. That urban traffic sources rather than point sources are responsible for ozone exceedances; and

3. That proper trajectory analysis generally rules out the significance of point sources in Will, Kane, McHenry and DuPage counties as contributors to ozone exceedances.

(R. 86-19, April 24, 1987, R. 1045-1048 and 1059).

While the Board finds Mr. Kauper's analysis to be interesting, the Board is not persuaded of the validity of his conclusions. Mr. Kauper bases his conclusions on the trajectory analysis. A trajectory is constructed by identifying a specific air parcel (i.e. one containing an ozone concentration in excess of the NAAQS for ozone) and tracing the locations of the air parcel backward in time using hourly wind data. Trajectory analysis attempts to determine the source of the emissions that ultimately led to the exceedances. Twenty-nine (29) separate trajectories were presented by Mr. Kauper showing the paths taken by the air parcels that led to ozone violations in Illinois and Wisconsin on 22 days during the 1985 and 1986 ozone seasons. These trajectories do tend to pass through the Chicago metropolitan area. They do not, however, tend to pass through the Chicago urban area during times when heavy traffic would be expected.

Assuming the urban area to be defined on the trajectory maps by the area bounded by Evanston, Des Plaines, ORD (O'Hare), Cicero, Midway, SW Pump, Calumet City and the lake, and assuming that heavy traffic would not be expected prior to 5:30 a.m. CST, only 8 of the 29 trajectories are indicated to have passed through the urban area at relevant times. On the other hand, at least 15 of the air parcels were over Lake Michigan during the time period after 5:30 a.m. On this simplistic basis, it appears more reasonable to assume that the problem stems from Lake Michigan emissions rather than urban traffic. That, of course, is not the case, however, and it appears most reasonable to hypothesize that the ozone precursors in most of the cited cases were injected into the atmosphere at some point prior to the last plotted point of most of the trajectories.

Thus, the data presented is of limited value in determining the sources of the ozone exceedances studies, and is of even more limited value with respect to the stated generalized conclusions. Furthermore, Mr. Kauper indicated that short of extending a complete analysis farther back in time, the best guess as to the trajectories prior to the last plotted points would be based upon a presumed movement similar to that indicated by the last few plotted points. (id. at 1074). If that is done, at least 20 of the 29 trajectories would be expected to pass near, or through, Will County. It is difficult to understand, then, how the Board could be expected to conclude that Will County sources are not contributing to these ozone violations. Mr. Kauper admitted that he was not familiar with the location of stationary sources in the Chicago area and that he simply assumed, based upon his knowledge of other cities, that the Chicago urban area would be dominated by mobile sources. (id. at 1083). Mr. Kauper further admitted that there is some uncertainty involved in plotting air parcel trajectories, particularly over the lake where there are no wind velocity measurements. (id. at 1075-1079). One such uncertainty is the presumption that wind speed increases by 50% when the air parcel moves offshore due to the reduction in surface friction. (id. at 1079-1080). Studies over oceans have shown a 35% factor. (id. at 1080). Over the distances involved, this difference could be significant, since the uncertainties could be additive.

The Board simply cannot conclude that Mr. Kauper's data supports his conclusion regarding ozone exceedances being caused by Chicago urban mobile sources. While the Board is inclined to agree that the EKMA model may have shortcomings as a predictor of ozone exceedances near Lake Michigan and that a substantial majority of the studied exceedances are impacted by lake effect winds, insufficient information has been provided to demonstrate that Will County does not contribute to those exceedances even assuming the accuracy of the plotted trajectories.

(R. 86-39, slip. op. at 4-5, July 16, 1987).

Also, the Board has admitted as Exhibits 58 and 59 to this proceeding data for ambient air levels concerning ozone. It is interesting to note that several of the 1987 exceedances occur in counties that are presently classified as attainment for ozone, namely Will, McHenry, and Peoria.

In response to IERG's recommendations, the Agency points to the Board to Attachment #20 of P.C. #6. Attachment 20 is a letter dated August 11, 1987 from Stephen Rothblatt, Chief of the Air and Radiation Branch of the United States Environmental Protection Agency, to Michael J. Hayes, Manager of the Division of Air Pollution Control for the Agency. In that letter, Mr. Rothblatt analyzes Mr. Kauper's testimony and states similar conclusions similar to that which the Board reached in R86-39. Also with regards to the use of EKMA as a model, Mr. Rothblatt concludes:

Unless and until a better technique is demonstrated (and in the absence of the data base necessary for more sophisticated models), USEPA will continue to recommend the use of EKMA for estimating emission reductions needed to attain the ozone standard. (P.C. #6, Attachment 20).

In conclusion, the Board is not persuaded by IERG that it should deviate from its earlier position with regard to the county issue. IERG had earlier raised this issue in the context of a motion which the Board rejected in its First Notice Opinion and Order. The rationale adopted by the Board in disposing of this motion is set forth above in this Opinion.

Adjusted RACT Emissions Limitation

IERG first suggests that Proposed Section 215.260 should be altered to make it clear that sources could petition for an adjusted RACT prior to the effective date of the regulation. It is the Board's position that an Adjusted RACT petition should be filed after the effective date of Subpart I.

Also, IERG requests that that same Section be altered to provide a 120 day period, after the time an emission source meets the applicability criteria, in which an emission source may petition for an adjusted RACT limitation. The original proposal provides that a petition must be filed at the time an emission source meets the applicability criteria. IERG claims that such a change is necessary to allow an owner or operator of an emission source reasonable time to file the proper petition for an adjusted RACT. IERG states that a plant's emissions could increase, which would trigger applicability, by changes in hours of operation and of production rates. Such changes according to IERG could take place without any plant construction or modification.

The Agency states that such a change in operation would be deliberate and capable of being anticipated. Consequently, the Agency believes that an owner or operator would be able prior to actually being subject to the rule. (P.C. #6, p. 58).

In principle, the Board agrees with IERG's position; however, the 120 day time frame is too excessive. As a result, the Board will allow 60 days in which to file a petition for an adjusted RACT once a source becomes subject to the rule. Section 215.260 has been altered accordingly.

Next, IERG proposes that Section 215.261(c)(3) should be amended in order to delete the requirement that the petition contain an evaluation of effects of the cost of achieving emissions reductions in relation to "the cost of the product or services provided by the emission source." Specifically, IERG objects to the fact that an owner/operator would have to supply the cost of the product or services. IERG claims that such information is "extremely confidential" and, therefore, is "not appropriate to require the inclusion of such data in a company's demonstration of economic reasonableness for an adjusted RACT emissions limitation." (P.C. #11, p. 19). The Board understands IERG's position; however, it also finds value in requiring a discussion of the impact of the cost of achieving emissions reductions. As a result, the Board will alter Section 215.261(c)(3) to read as follows:

- 3) An evaluation of the effects of the cost of achieving emissions reduction in relation to:
 - A) The annualized capital and operating budgets of the emission source over the most recent five year period;
 - B) Such other costs and economic information as the petitioner believes may assist the Board in reaching a decision.

Such a change would allow an owner or operator to refrain from disclosing absolute costs, yet, would give the Board an opportunity to consider other types of cost information. The Board notes, however, that burden of proof in an Adjusted RACT proceeding is on the petitioner.

The Board has also added subsection(c)(4) which allows for the introduction of other factors that may be useful for the Board to consider in making its Adjusted RACT determinations. The additional factors of subsections(c)(4)(A) through (c)(4)(H) are taken from the USEPA public comment (P.C. #13; see also P.C. #15, Attachment 16) which sets forth a list of factors, other

than cost effectiveness, which "must be considered in establishing RACT." The Board will view such conditions as mitigating factors in adjusted RACT proceedings. They do not supercede or carry equal weight with the established technical and economic considerations. In addition, the Board has included, as subsection(c)(4)(H), the "potential for operational modifications." This factor enables the Board to consider the role of plant operational changes in the achievement of compliance or reducing emissions as part of an adjusted RACT.

Finally, with regard to the adjusted RACT provision, IERG requests that Section 215.264 be amended so as to eliminate the requirement that the Board "shall require compliance no later than December 31, 1987." Instead, IERG would rather have the language read:

- b) shall require compliance by a date certain as established by the Board for existing emission sources or prior to the operation of a new emission source.

In light of the fact that the Agency is now proposing a compliance date for the requirements of Subparts AA, PP, QQ and RR of April 1, 1989, the Board finds that it is reasonable to alter Section 215.264(b) as requested by IERG.

Economic Impact Study

On November 2, 1987, the Department of Energy & Natural Resources (DENR) filed an Economic Impact Study (EcIS) concerning the various proposals filed in this matter. Along with the EcIS, DENR submitted a Concurring Opinion by the Economic Technical Advisory Committee. Pursuant to Section 27(b) of the Act, the Board held hearings to consider this EcIS on December 14, 1987, in Springfield, and on December 18, 1987, in Chicago. At those hearings, the Board received testimony from Ms. Mary Goodkind and Mr. Russ Wallauer of Impell Corporation. Impell Corporation was the consultant contracted by DENR to prepare the EcIS. Also, the Board received testimony from representatives of Viskase Corporation, Allsteel, and Stepan.

According to the EcIS, the Agency's Alternative Proposal would reduce VOM emissions by 1715 tons per year. (EcIS, p. 46). The EcIS also reports the results of a modeling study which attempts to estimate the overall increase in initial capital and annual operating costs which would be incurred by the Agency's Alternative Proposal. The model's results indicate a total Chicago metropolitan area increase in initial capital expenditures of \$10,828,100 and a total increase in annual operating costs of \$4,855,000. Capital and operating expenditures in the East St. Louis area would be small, according to the EcIS. These figures attempt to reflect the fact that "capital expenses incurred by manufacturers would result in an increased demand for industries supplying control equipment." (EcIS, p. 69).

In general, the EcIS concludes:

Comparison of costs and benefits for the proposed rules [generic rule] is difficult because cost of compliance can be quantified with much greater certainty than the benefits that would result. Considering each [RACT] proposal individually, incremental benefits are small. However, the total set of RACT rules plus other measures for control of VOM precursors, such as mobile source controls, would have significant benefits in improving ambient air quality. In addition, progress toward attainment of the National Ambient Air Quality Standard for Ozone would help to reduce the probability of sanctions on federal funding and would remove one set of requirements for lifting of the construction moratorium in non-attainment areas.

(December 14, 1987, R. 872)

Impell estimates that compliance with the Alternative Proposal would result in an annual VOM emission reduction of 1527 tons. (December 14, 1987 R. 868). According to Impell, most of the projected emission reductions would take place in the Chicago metropolitan area. Impell also states that the reduced emissions equate to about 0.5 percent of the total 1986 VOM emissions from all sources in the Chicago area. Also, Impell concludes that these reductions would provide a 0.56 percent reduction of the ozone concentration in the ambient air of the Chicagoland area. (December 14, 1987, R. 870; EcIS p. 49). Impell's witness also testified that there would be "no discernible effect on the air quality" for the St. Louis area. (December 14, 1987, R. 870).

With regard to human health benefits, the Impell witness testified that "[a]lthough some reduction and discomfort may be theorized for sensitive individuals effects on health would be minor and difficult to quantify for the small change in ozone levels predicted." (December 14, 1987, R. 871).

Impell attempted to assess and quantify the benefits that would result from the Agency's Alternative Proposal. In seeking to explain the difficulty in quantifying human health benefits in some sort of monetary way, the Impell witness referred the Board to page 56 of the EcIS as the "appropriate statement" concerning health benefits. (December 14, 1987, R. 904). That passage of the EcIS states:

The reduction achieved by these rules, taken by themselves, is not likely to be discernible against the background of other

pollutants and irritants. Nevertheless, although changes in health effect for an individual would be too small to quantify, it can at least be theoretically postulated that some benefits would accrue to the total exposed population. Studies have shown that some individuals respond more strongly to ozone exposures; these individuals would benefit most from reduced ozone levels. Another group that would benefit would be those who tend to exercise heavily during the summer ozone season. Even a slight reduction in peak ozone levels may increase the comfort of these individuals. In general, however, methods for valuation of health and comfort are not sufficiently developed or sensitive enough to allow assignment of a monetary value to the benefits predicted.

EcIS, p. 56

When discussing the effects of ozone on humans, the EcIS states "two types of at risk groups have been identified: those with pre-existing respiratory disease and those healthy individuals who exhibit unusual sensitivity to ozone. This group known as responders, represents the upper 5 to 20 percent of the ozone response distribution." (EcIS, p. 54).

The EcIS summary mentions that ozone related symptoms include throat dryness, pain with inhalation, headache and nausea and concludes that:

Even a very small change in peak ozone levels has potential benefits from reducing the likelihood of such symptoms. The monetary value of such a benefit is, however, too small to quantify.

EcIS, p. 73

When questioned about quantifying the benefit of relieving such symptoms by reducing ozone levels, the Impell witness replied:

Again, we're talking about things that could be significant, I mean reduction of headache in a large number of people is certainly an important benefit, but how you assign a dollar value to it with any amount of certainty is very difficult.

R. p. 895

When asked further about the quantification of health benefits, Impell's witness responded:

It's difficult to measure, very difficult to quantify, but we need to acknowledge that the potential is there. Some literature studies have demonstrated that reduction in ozone can have significant economic benefits and improvement in health and reduce damage. We know that, but again, no matter how desirable it would be to be able to quantify it in this case, I don't feel that it is advisable for a contractor to over-reach our current level of our capability to make such an assignment.

(December 14, 1987, R. 901).

In response to inquiries by Board Member Marlin, Impell submitted at the second EcIS hearing exhibit 14 which attempted to quantify some health benefits which could be gained by the reduction of ambient air ozone concentration. Impell was asked to quantify the dollar benefit associated with the comfort level of "responders" improving to the point that less pain medication was purchased and less productive time was lost due to ozone levels. Specifically, Impell was requested to look at levels of the Chicago area population which could be considered to be "ozone responders." It was made clear that this information would be for illustration only since it would not have a high degree of scientific accuracy. Impell used a 1984 Chicago area population of 7,215,000. Since 5 - 20 percent of the population could be classified as responders, Impell was able to estimate some monetary benefit realized by this fraction of the general population if even some small relief from symptoms occurred due to lower ozone levels.

Impell first calculated the amount of money saved through regaining of productivity which would otherwise be lost due to physical discomfort from higher ozone levels. Impell based a value of 1 hour of productivity to be worth \$9.09 -- this is taken from a base compensation of \$15,000 per year which includes wages and benefits. The table below, for example, shows that if 15 percent of the population responds to ozone and 60 percent of that number experiences relief, the dollar value associated with each such person regaining one hour of productivity would be \$5,900,344. Regaining six hours per year would produce an annual benefit of over \$35 million. Similar data points were developed for a whole range of different percentages of responders and those gaining relief. A portion of the figures derived by Impell is listed below for a number of assumptions:

<u>Population Who Are Responders</u>	<u>Responders Who Experience Relief *</u>	<u>Population Who Experience Relief</u>	<u>Value of 1-hour Per Year Regained Productivity</u>	<u>Value of 2 Hours Per Year Regained Productivity</u>	<u>Value of 6 Hours Per Year Regained Productivity</u>
5%	60%	3.00%	\$1,966,781	\$ 3,933,563	\$11,800,687
10%	60%	6.00%	\$3,933,563	\$ 7,867,125	\$23,601,375
15%	60%	9.00%	\$5,900,344	\$11,800,588	\$35,402,063
20%	60%	12.00%	\$7,867,125	\$15,734,250	\$47,202,750

Impell also has estimated the amount of money saved due to responders experiencing relief from headaches which would otherwise occur at elevated ozone concentrations. Such cost estimates were quantified at an average cost of a single tablet of pain reliever equalling 19¢. Once again, Impell used a 1984 Chicago area population of 7,215,000. The table below shows that if 20 percent of the population gains relief to the extent that one dose of headache remedy per year is foregone, the annual benefit would be over \$500,000. Some of the figures derived by Impell are presented below:

<u>Population Who Are Responders</u>	<u>Responders Who Experience Relief *</u>	<u>Population Who Experience Relief</u>	<u>Savings Due to One Less Tablet of Medication</u>	<u>Savings Due to One Less Dose of Medication</u>	<u>Savings Due to One Less Small Bottle of Medication</u>
5%	100%	5.00%	\$ 68,543	\$137,085	\$ 959,595
10%	100%	10.00%	\$137,085	\$274,170	\$1,919,190
15%	100%	15.00%	\$205,628	\$411,255	\$2,878,785
20%	100%	20.00%	\$274,170	\$548,340	\$3,838,380

Even though these cost estimates are not based upon any sort of experimental results or formal studies, it is apparent that significant health benefits can be realized even if only a small fraction of the population experiences some relief due to ozone reduction. While this analysis is interesting, it can be given little weight in this proceeding. The Board does, however, give considerable weight to Impell's conclusion that slight reductions in ozone level can increase the comfort level of significant numbers of people.

At the EcIS hearing, an Impell witness also testified that "[s]tudies of improvements in crop yields with reduced ozone concentrations indicate that the estimated reduction could result in an improvement of profits for Illinois farmers of about \$700,000. This would reflect the increase in profits for farms located in the applicable counties under the rule near the Chicagoland area (Cook, DuPage, Will, Kane, Lake, and McHenry counties)." (EcIS p. 60-62).

Also in response to a question by Board Member Marlin, Impell introduced as a part of EcIS Exhibit 14, further cost estimates as to increased profits due to ozone concentration reductions from the Alternative Proposal. These various cost estimates reflect differing prices in crops covering the years 1970 - 1986. Impell's original figure of a \$700,000 increase in profits was based on crop prices for 1985. Similarly, Impell has expressed the increased profit for the years 1970-1986 in 1985 dollars. Over this sixteen-year time frame, the largest amount of increased profits, due to an ozone concentration reduction, would have been \$1,792,315 which corresponds to the crop prices of 1974. The smallest amount of increased profits for that same time period would have been \$567,498 (1985 dollars) which corresponds to 1986 prices. (EcIS Exhibit #14).

* Impell states that it made no determination as to estimate what percent of responders would actually attain relief. However, various assumptions were utilized to calculate the amount of money saved. (December 18, 1987, R. 1111).

The Board understands that Impell has assumed that the amount of ozone reduction realized by the proposed generic rule would be felt in an equal manner across Cook, DuPage, Will, Kane, Lake, and McHenry counties. Even after considering price fluctuations of crops, which occur from year to year, Impell's figures suggest that farmers would realize a considerable increase in profits if the generic rules were promulgated.

The EcIS also addresses the impact upon the natural environment from the reduction of the ozone concentration in the ambient air. "In addition to causing damage to agricultural crops, ozone may damage or stress natural vegetation ecosystems. The effects of ozone alone are more difficult to quantify in the natural environment; however, significant effects have been measured in some natural vegetation species from ozone exposure." (EcIS, p. 62).

At hearing, Impell's witness stated that "[d]amage functions for effects on materials indicated potential savings of about \$100,000 for the Chicago area population. However, the reliability of the methods of calculation is uncertain." (December 12, 1987, R. 871). This annual savings would be achieved through reduced damage to materials such as textiles and paints within the 6-county Chicago, urban area. (EcIS, p. 66).

Impell has also addressed the issue of Illinois' non-attainment status in relation to the promulgation of this generic rule:

USEPA has proposed a finding, that the State has failed to demonstrate reasonable, further progress towards attainment of the ozone air quality standard. This finding would result in a continuation of a moratorium on construction of new major VOM sources. The USEPA may also impose sanctions that would restrict federal highway and sewage treatment funds. The loss in aid could reach over \$100,000,000 while continuation of the construction moratorium would have additional adverse effects on industrial development in an affected area. The failure of the State to demonstrate that reasonable further progress could also lead to the USEPA to impose its own air quality regulations, which may be more restrictive than those currently proposed.

(December 14, 1987, R. 871-872)

Impell also testified that one federal sanction which should be included in the above list is the withholding of federal funds from Illinois' air pollution control program. (December 14, 1987,

R. 879). Impell's witness agreed that if the continuation of a construction moratorium as well as the discontinuation of grants to the state air pollution program could be quantified, then there would be an increased benefit to the State due to the promulgation of this rule. (December 14, 1987, R. 882-883).

As a part of comments to the EcIS hearings, DENR supplied the Board with updated estimates as to the impact on jobs if the Agency's Alternative Proposal were adopted. The model used to generate these new estimates was not available at the time of the preparation of the EcIS. Consequently, the estimates with regard to job impact in the EcIS are different from those submitted by DENR in its comments. According to the model used by the EcIS, the loss of jobs between 1988 and 1992 if the Agency's Alternative Proposal were adopted, would amount to 318 jobs. (EcIS, p. 71). According to the new model used by DENR, the loss of jobs for that same time period would total 479. (P.C. #14, p. 7). These figures include jobs in the manufacturing, non-manufacturing and governmental sectors. The Board notes that the Agency's Alternative Proposal used as a basis for these figures includes the regulation of Viskase Corporation.

Viskase Corporation

The Alternative Proposal would regulate processes utilizing the viscose process through Subparts PP and QQ. The Board has rejected the Agency's proposal to regulate viscose processes by a separate Subpart OO. According to the Agency, the only affected facility due to this regulation would be Viskase Corporation, which has one of its six plants located at Bedford Park in Cook County. (P.C. #6, p. 8). The viscose process is the only practical commercially available process for producing regenerated cellulose food casings. (October 24, 1986, R. 193). Viskase utilizes this process in order to manufacture cellulose food casings used in the meat processing industry to produce sausage, hot dogs, salami, and liverwurst. (October 24, 1986, R. 225). Viskase's Bedford Park facility employs between 800 and 1,000 people. Viskase is one of only two companies in the United States which utilizes the viscose process to produce cellulose food casings. The only other domestic manufacturer of cellulose food casings is Teepak Corporation located in Danville, Illinois. (October 24, 1986, R. 192). Mr. Robert Odewald of Viskase testified several times during the hearing process. Essentially, Viskase's position can be summarized by three points. First, it believes that its carbon disulfide emissions should not be regulated due to the alleged fact that carbon disulfide is not photochemically reactive and involved in the production of ozone. Secondly, Viskase claims, counter to the Agency's position, that a carbon adsorption control is technically infeasible. And finally, Viskase asserts that thermal incineration for control is economically unreasonable.

The Photochemical Reactivity of Carbon Disulfide

Viskase claims that its carbon disulfide emissions should not be regulated by the generic rule because carbon disulfide is not photochemically reactive to produce ozone. The Agency, through testimony and comments, has claimed that carbon disulfide should be regulated due to the classification of carbon disulfide as having "intermediate reactivity." (P.C. #6, p. 11, February 10, 1987, R. 434-435). Viskase takes an opposing view and states that such a classification has been made only because of the uncertainty in the photochemical reactivity of carbon disulfide. (April 23, 1987, R. 997). Viskase concludes that if the Board finds that Viskase must be regulated under this generic rule, then the Board is implicitly finding that carbon disulfide is photochemically reactive to form ozone. (April 23, 1987, R. 1000).

As the Board stated earlier in this opinion, the definition for VOM only appeared in the Agency's Alternative Proposal for notice purposes. In R86-37, the Board has adopted a definition of VOM. It was clear from the Joint Hearing Officer Order issued on March 19, 1987 that any issues regarding what should or should not be classified as a VOM should have been addressed in R86-37. This docket was to address the specific controls imposed on certain VOM sources under a generic proposal. Specifically, the issues involved in this proceeding concern the reasonableness of controls -- not whether certain types of emissions are properly categorized as a VOM.

The proposal considered here regulates only VOM. Consequently, in order to determine what VOM is, one must look to the definition as adopted by the Board in R86-37. It is readily apparent that the Agency is taking the position that carbon disulfide is a VOM. Viskase has never asserted that carbon disulfide does not fall under the VOM definition which was proposed and finally adopted by the Board in R86-37. Essentially, Viskase wants the Board to evaluate the photochemical reactivity of carbon disulfide and come to the conclusion that it should not be regulated. The Board finds that such an issue should have been raised in the R86-37 proceeding, not here. It would be improper for the Board in this proceeding to come to a conclusion that carbon disulfide should not be included under the VOM definition.

Notwithstanding the above position, the Board has substantively reviewed the evidence in the record with regard to this issue. It appears that carbon disulfide is photochemically reactive; however, the issue of contention is the degree of the photochemical reactivity. The Board finds that while the record warrants a conclusion that carbon disulfide is less reactive than many VOMs it does not conclusively support the contention that carbon disulfide should not be subject to VOM regulation.

Carbon Adsorption Control

It is the Agency's position that Viskase can control its carbon disulfide emission through the use of a fluidized carbon bed adsorption process. The Agency claims that such a control technique is technically feasible. The Agency bases this conclusion on information it has obtained regarding the operation of a fluidized carbon bed adsorption process on a viscose rayon plant in England. The Agency states that the "Landmark" adsorption process was utilized by Courtaulds Ltd. for 17 years. (February 10, 1987, R. 437).

Viskase states that the information it has received from Courtaulds indicates that the Landmark system utilized by Courtaulds would cost Viskase \$20,000,000 just for the carbon adsorption technology without any ancillary equipment. Also, Viskase states that the carbon adsorption removal process utilized by Courtaulds would likely only achieve a 35 to 40 percent removal efficiency as applied to Viskase. According to the Viskase, the carbon adsorption tower would have to be at least 200 feet tall. Viskase is currently under a FAA restriction of a 143 feet due to its close proximity to Midway Airport. Viskase also concludes that the use of a carbon adsorption process for removing its carbon disulfide presents an unacceptable risk of fires. It is important to note that Viskase is located near a residential area. (April 23, 1987, R. 1017-1021). Viskase also cites a recent explosion and fire at Teepak Company in Danville as a demonstration of the risk of fire that is always present when dealing with carbon disulfide. (April 23, 1987, R. 1003, 1159). Viskase concludes that the incineration option for control is more cost effective than the activated carbon adsorption process, even if that process were feasible. (April 23, 1987, R. 1023).

The Board believes that Viskase has presented sufficient information in support of its conclusion that the fluidized carbon bed adsorption process is technically infeasible for Viskase. Even though the Agency presented much information on the Courtauld's Landmark process, Viskase successfully rebutted almost all of the Agency's claims with regard to this control technology.

Incineration Control Option

It is the Agency's position that incineration is an economically reasonable way for Viskase to comply with the proposed generic rule. Specifically, at hearing, the Agency pointed to a Reeco retherm incineration process which has a 95 percent heat recovery. (February 10, 1987, R. 439, 445.) Viskase claims that incineration is, in fact, the only technically feasible method for compliance. However, Viskase states that such a compliance option would be economically unreasonable. After the Agency suggested that Viskase could install a Reeco

retherm incinerator, Viskase presented the Board with an estimate as to the cost of the installation of such a system. Viskase's estimate relies upon a quote from Reeco. The estimate includes the utilization of two thermal oxidizers (each processing half of Viskase's air stream) as well as the cost for installing sulfur dioxide scrubbers, which would be necessary due to the production of sulfur dioxide from the incineration process, along with all the ancillary systems. Viskase arrives at a grand total of \$13,498,000. (Exhibit 46, attachment C).

This figure is the lowest cost estimate proffered by Viskase with regards to the incineration option. A letter from Reeco indicates that the redundancy of the two incinerators as well as the selection of corrosion resistant materials makes the installation of the system extraordinarily expensive. (Exhibit 46, Attachment C). Viskase claims that it needs to maintain a continuous air flow through the vent system so that in case of malfunctions by the incinerator, the plant would not have to shut down. With two incinerators, Viskase would be assured of at least 50 percent of the air flow to be processed in the event that one incinerator malfunctions. Due to safety concerns, it is imperative that the carbon disulfide is continuously vented out of the plant, according to Viskase. (December 18, 1987, R. 1030-1031).

Viskase also testified earlier in the proceeding that if it utilized incineration as a control option, it would be creating various other pollutants that would have to be similarly treated. Specifically, Viskase cited that each pound of carbon disulfide oxidized would produce 1.7 pounds of sulfur disulfide (SO_2). (October 24, 1987, R. 201). Due to this fact, SO_2 scrubbers would be necessary whenever incineration is utilized at the plant and are included in cost estimates. Viskase wishes to operate the incinerators, if it is forced to utilize incinerators, for only seven months out of the year. This would be consistent with Ill. Adm. Code 215.106, according to Viskase. (April 23, 1987, R. 1009). During the winter months when the incinerators would not be operative, Viskase would utilize hydrogen sulfide scrubbers which it currently operates. During such times, the carbon disulfide would just be vented to the atmosphere uncontrolled. (December 18, 1987, R. 1031).

Impell, in the EcIS states, that "[t]here is substantial evidence to suggest that Viskase's actual cost for carbon disulfide control at the Bedford Park facility would be higher than the generic industry experience cited by IEPA. However, the Viskase estimates are much higher than typical costs for the purchase, installation, and operation of similar equipment." (EcIS, p. 31). Impell attempted to recalculate the cost estimates for Viskase in order to reflect areas in which Impell believes savings can be realized. Although Impell did not develop a detailed design proposal, it concluded that Viskase "may have been overly conservative in both the specification of

system design and in the estimation of the corresponding course." Impell believes that installation of the controls could be completed for \$4 to \$6 million less than what Viskase estimates. As a result, Impell estimates a cost effectiveness of \$3,500 per ton removed; Viskase has estimated the cost to be \$5,363 per ton removed. Both these cost effective figures would be based on 7 month operation of the incinerators. On a 12-month per year basis, the Impell estimates lead to cost effectiveness of \$2,400 per ton and Viskase estimates come to \$3400 per ton.

The Agency requests that the Board utilize Impell's figure regarding the cost of incineration at Viskase's plant. However, the Agency emphasizes that the Board should consider the cost effectiveness figures for a 12-month operation time period rather than the 7-month time period proposed by Viskase. The 12-month time period would substantially reduce the cost effectiveness figures. (P.C. #15, p. 9). Appendix F compares the various cost effectiveness estimates. They are as follows:

	<u>COST PER TON REMOVED</u>		
	<u>Viskase Estimate</u>	<u>Impell Low Estimate</u>	<u>Impell Conservative Estimate</u>
7 mo./yr. (788 tons removed)	\$5363	\$2993	\$3530
12 mo./yr. (1350 tons removed)	\$3409	\$2030	\$2412

(EcIS Attachment F)

The Illinois Department of Commerce and Community Affairs (DCCA) expressed concern that including Viskase in the rule could lead to a closing of the facility. If that occurs, about 1,000 jobs could be lost. DCCA requested that the "Board give strong consideration to the economic impact of the proposed rulemaking..." (P.C. #18). The Economic Development Commission of the City of Chicago also expressed concern about the impact of the rule on Viskase. (P.C. #21).

The Board notes that at hearing Viskase specifically withdrew the portion of its prepared testimony that restated its earlier contention that the rule would necessitate cessation of production operations. (December 18, 1987, R. 977). The plant is Viskase's most expensive plant and is used as a swing plant when its more efficient plants are at capacity. (December 18, 1987, R. 1004 and 1009). The witness further testified that controls would make the plant even less competitive. "...it would render that plant non-competitive within our own plants and with our competition..." (December 18, 1987, R. 1028). Subsequently, in P.C. #17, Viskase again pointed to plant closing as a potential outcome of the rule:

Viskase has also shown that the overall economic impact of requiring the Bedford Park Plant to install incineration control equipment would be extreme. If incineration were required, the Bedford Park Plant would simply be too expensive to continue to operate, especially given the fact that Teepak Corporation, of Danville, Illinois, Viskase's only domestic competitor, would not be subject to similar control requirements. The immediate effect of such a regulation would be that the Bedford Park Plant would be unable to compete with Teepak, foreign competitors or with other Viskase plants, and would be forced to cease operation.

The plant generates 1,500 tons per year of carbon disulfide when operating at capacity. During 1985 and 1986, it averaged only 218 tons because business was slow. (December 18, 1987, R. 988). During 1987, business picked up due to an explosion at a competing plant. Viskase does not desire to have its permitted emission level, of 1500 tons per year, reduced. (December 18, 1987, R. 1002).

In R82-14 Docket A and B (Final Order August 21, 1985), the Board did not include Viskase in a rule requiring controls. At that time, controls were estimated to have a capital cost of \$16 to \$20 million and annual operating costs of about \$10 million. The control cost per ton was estimated at about \$7,000.

The USEPA has stated that it disagrees with Viskase's contention that control of carbon disulfide emissions is economically infeasible. (P.C. #13). The comment does, however, list some other considerations:

In evaluating economic feasibility for RACT, the Agency gives significant weight to cost-effectiveness. However, no specific cost-effectiveness threshold exists to determine RACT. Numerous other factors (i.e., age of facility, quantity of emissions, nature of emissions, severity of existing air quality problems, extent of controls present, comparability to standard industry practice in related industries, cross media impacts, economic impacts, etc.) must be considered in establishing RACT.

Viskase filed a comment on this USEPA comment on January 28, 1988 well after the comment period closed. The Board will accept this comment given the nature and timing of P.C. #13.

The State of Illinois is required to meet the 1982 state implementation plan (SIP) requirements. As part of that package, the IEPA has proposed including control at the Bedford Park Plant. Removing Viskase from the generic rule will cause a substantial reduction in the amount of VOM controlled by the SIP. It would also leave Viskase as a major source of VOM in a non-attainment area with no VOM control at all. Such a situation could reasonably be interpreted as counter to the SIP requirements imposed by Section 172 of the Clean Air Act and could lead to rejection of the Illinois SIP by USEPA with resulting sanctions.

This proceeding has established to the Board's satisfaction that incineration is the only technically feasible control method offered in this record, despite continued Agency support of its discredited adsorption position. The remaining issues revolve around economic feasibility and mitigating circumstances such as the considerations listed in the USEPA comment.

The Board will keep the viscose process in the generic rule. The Board cannot for a source of this magnitude find that the per ton cost of control by itself is unreasonable. At the same time, the Board notes that Viskase may seek an adjusted RACT. During such a proceeding, Viskase could address the costs in the light of mitigating factors and other issues. For example, the proceeding could address the possibility of treating an increment of the emissions rather than the entire air flow from the plant. Another possibility would be limiting production during the ozone season. The current record leaves only "an all or nothing" choice where the desirable outcome may be something in between. The Agency has reached agreements with other industries regarding VOM emissions. It is possible that discussions with the Agency could lead to a mutually acceptable adjusted RACT proposal.

The Board has no desire to see the Bedford Park Plant close, yet is not convinced that the current record has made a strong enough case to defend leaving such a major source entirely out of the SIP. If Viskase prevails in an adjusted RACT proceeding, the matter will go to USEPA as a SIP revision rather than as an integral part of the SIP. An adverse federal decision at that time would not jeopardize the entire SIP. (October 24, 1986, R. 25). The Board is aware of Viskase's concern over revealing costs and notes that there are provisions for confidentiality. Viskase has fully participated in this proceeding and is understandably irritated at the prospect of expending additional resources seeking adjusted RACT. The Board is sympathetic, but cannot exclude Viskase given the content of this record and the necessity to meet the requirements of the Clean Air Act.

Compliance Date

At hearing on December 14, 1987, the Agency proposed a new compliance deadline of April 1, 1989. After contacts with USEPA personnel, the Agency concludes that the USEPA would approve this generic RACT rule even if it contained a compliance date which was after December 31, 1987, "provided that the date was considered reasonable." According to IERG, the new date of April 1, 1989 is "economically reasonable and technically feasible for all its members except Viskase Corporation. In addition, IERG asserts "that the new compliance date is fully approvable" by the USEPA. (P.C. #22, p. 1). The Agency further asserts that recent statements and actions of the USEPA suggest a USEPA interpretation that the Clean Air Act and its regulations do not mandate a December 31, 1987 compliance date. (P.C. #15, p. 20-23).

The Board concurs with the Agency in that a compliance date of April 1, 1989 would provide a reasonable time limit by which sources must comply with the control requirements imposed by the generic rule.

Conclusion

In general, the Board finds that the regulatory framework in the Agency's Alternative Proposal constitutes RACT. Any specific sources which find economically unreasonable or technically infeasible the 81 percent control limitation or the 3.5 pounds of VOM per gallon of coating limitation can pursue an alternative emission limitation under the adjusted RACT provision of the rule. This allows the rule some flexibility in cases where a general generic control requirement cannot be applied. The Board has not come to the conclusion that all sources identified by the Agency on its inventory are currently meeting the requirements imposed by the generic rule or that such requirements are RACT for every source. That is, the Board is merely adopting a general framework for regulatory limits in this rule.

The record contains discussion of various issues involving many types of firms, operations, and processes. Often, the record is quite site-specific in its development. In this Opinion, the Board has discussed issues which the Board finds are of primary importance. However, this Opinion is not to be construed as an all inclusive summary or discussion of the large record in this proceeding. The Board has looked at the record as a whole and has come to the conclusion that the Alternative Proposal as presently modified by the Board is reasonable and warrants adoption.

The EcIS indicated some adverse economic impacts that would result from the adoption of this rule. However, in general, the Board believes that this rule is necessary as being one step closer toward Illinois's achievement of attainment status for the

Chicago and East St. Louis areas. When implemented, this rule would reduce according to the Agency 2282 tons of VOM per year. (P.C. #6, Attachment 1; P.C. #15, p. 7). If the Board does not promulgate regulations or otherwise take action so as to enable Illinois to make reasonable progress in achieving attainment status with regard to ozone, Illinois could face federal sanctions equaling hundreds of millions of dollars. Therefore, when looking at this RACT rule as a part of a system for compliance with national ambient air quality standards, the Board believes that the promulgation of this regulation would not impose significant adverse economic impact on the people of the State of Illinois. However, the failure of the Board to take action, could create a severe adverse economic impact on the State.

The Board believes that the environmental improvement which would result from the implementation is significant. It is clear from the record that the improvement in the air quality that would result from the implementation of this rule, although statistically small, would benefit many people, particularly farmers and those who are sensitive to ozone.

In addition to the modifications to the Alternative Proposal which have been accepted by the Board and enunciated in this Opinion, the Board has also altered some of the language of the rule so as to conform to requirements by the Joint Committee on Administrative Rules concerning incorporations by reference.

ORDER

The Board hereby adopts as final the following amendments to be filed with the Secretary of State.

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

Add the following definitions to Section 211.122:

"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.

"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 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.

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

"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.

The following sections are added to Part 215:

SUBPART I: ADJUSTED RACT EMISSIONS LIMITATIONS

Section 215.260 Applicability

Owners and operators of emission sources subject to Subparts PP, QQ, or RR may petition the Illinois Pollution Control Board for an Adjusted Reasonably Available Control Technology (RACT) Emissions Limitation for such emission sources. Owners and operators of emissions sources which are in existence on the effective date of this Subpart shall submit to the Illinois Pollution Control Board a Notice of Intent to Petition for an Adjusted RACT Emissions Limitation within 60 days after the effective date of this Subpart. Petitions for an Adjusted RACT Emissions Limitation shall be filed within 120 days after the effective date of this Subpart or at the time a construction permit is applied for from the Agency for the emission source, or 60 days after the time an emission source meets the applicability criteria set forth in such Subparts. For the purposes of this Subpart, uncontrolled volatile organic material emissions are the emissions of volatile organic material which would result if no air pollution control equipment were used.

(Source: Added at 12 Ill. Reg. ,
effective)

Section 215.261 Petition

A petition for an Adjusted RACT Emission Limitation shall contain:

- a) A specific proposal of, and support for, an Adjusted RACT Emissions Limitation which would apply to the emission source that is the subject of the petition as well as a showing at a hearing held pursuant to Section 28.1 of the Environmental Protection Act (Act) that the application of the applicable limits of Section 215.926(a)(1) and (2), 215.946(a)(1) or 215.966(a)(1) would be technically infeasible or economically unreasonable for that emission source.
- b) Information on the technical feasibility of reducing emissions of volatile organic material from the emission source including, but not limited to:
 - 1) A complete description of the operations of the emission source.
 - 2) A discussion of all available compliance strategies for achieving the emissions reduction prescribed by the applicable section and the technical feasibility of each compliance strategy.
 - 3) Comparisons of the nature and quantity of uncontrolled emissions to:
 - A) Emissions reductions which would be achieved pursuant to the applicable Section for each compliance strategy listed in Section 215.261(b)(2); and
 - B) Emissions reduction which would be achieved pursuant to the proposed Adjusted RACT Emissions Limitation.
 - 4) The basis for determining that the proposed method of emissions reduction is RACT for the that emission source and all information supporting that determination.
- c) Information on the economic reasonableness of reducing emissions of volatile organic material from the emission source including, but not limited to:
 - 1) A comparison of the relative costs of achieving the emissions reduction pursuant to Section 215.926(a)(1) and (2), 215.946(a)(1) or 215.966(a)(1) and pursuant to the proposed Adjusted RACT Emissions Limitation including for each compliance strategy:
 - A) Capital costs;
 - B) Operating costs;

- C) Any economic benefits, such as material recovery; and
 - D) Other costs and benefits.
- 2) An evaluation of the cost effectiveness in terms of annualized net cost per ton of volatile organic material reduction for each compliance strategy. Volatile organic material reduction is the amount of uncontrolled volatile organic material emissions less the amount of volatile organic material emissions after controls.
 - 3) An evaluation of the effects of the cost of achieving emissions reduction in relation to:
 - A) The annualized capital and operating budgets of the emission source over the most recent five-year period; and
 - B) Such other costs and economic information as the petitioner believes may assist the Board in reaching a decision.
 - 4) A discussion of other factors the petitioner may consider relevant such as:
 - A) Age of facility;
 - B) Quantity of emissions;
 - C) Nature of emissions;
 - D) Severity of existing air quality problems;
 - E) Extent of controls present;
 - F) Comparability to standard industry practice in related industries;
 - G) Cross media impacts; or
 - H) Potential for operational modifications
 - 5) The basis for determining that the proposed method of emissions reduction is RACT for the emission source and all information supporting that determination.

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

Section 215.263 Public Hearing

In a public hearing before the Board noticed and held pursuant to the requirements of Section 28.1 of the Act, the petitioner for an Adjusted RACT Emissions Limitation shall prove:

- a) That the emissions limitation prescribed pursuant to Section 215.926(a)(1) and (2), 215.946(a)(1) or 215.966(a)(1) does not constitute RACT for the specific emission source; and
- b) That compliance with the proposed Adjusted RACT Emissions Limitation:
 - 1) Is RACT for that emission source based on the information provided in the petition and at the hearing addressing subjects described in Sections 215.261 and
 - 2) Will not cause or contribute to an increase in emissions so as to prevent or interfere with the State's attainment of the air quality standards set forth in 35 Ill. Adm. Code 243.123 and 243.125.

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

Section 215.264 Board Action

The Board shall issue and maintain opinions and orders pursuant to the requirements of Section 28.1 of the Act. In addition, the Board shall publish a list of its determinations in accordance with Section 28.1 of the Act. If an owner or operator of an emission source meets the requirements of Sections 215.261 and 215.263 the Board may establish an Adjusted RACT Emissions Limitation. Such Adjusted RACT Emissions Limitation:

- a) Shall substitute for that limitation otherwise prescribed by Section 215.926(a)(1) and (2), 215.946(a)(1) or 215.966(a)(1) and
- b) Shall require compliance by a date certain as established by the Board for an existing source or prior to the operation of a new emission source.

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

Section 215.267 Agency Petition

The Agency may petition the Board for an Adjusted RACT Emission Limitation for an emission source subject to this Subpart at any time after the effective date of this Subpart. The provisions of

Sections 215.261, 215.263, and 215.264 shall apply to such petitions.

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

SUBPART AA: PAINT AND INK MANUFACTURING

Section 215.620 Applicability

- a) This Subpart shall apply to the following counties:
Cook, DuPage, Kane, Lake, Macoupin, Madison, McHenry,
Monroe, St. Clair and Will.
- b) This Subpart shall apply to all paint and ink
manufacturing plants which:
 - 1) include process emission sources not subject to
Subparts B, E, F, N, P, Q, R, S, U, V, X, Y or Z of
this Part, and which process emission sources as a
group would emit 100 tons or more per year of
volatile organic material if no air pollution
control equipment were used, or
 - 2) produce more than 2,000,000 gallons per year of
paints or ink formulations, which contain less than
10 percent, by weight, water, and ink formulations
not containing as the primary solvents water, Magie
oil, or glycol.
- c) For the purposes of this Subpart, uncontrolled volatile
organic material emissions are the emissions of volatile
organic material which would result if no air pollution
control equipment were used.

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

Section 215.621 Exemption for Waterbase Material and Heatset
Offset Ink

The requirements of Sections 215.624, 215.625 and 215.628(a)
shall not apply to equipment while it is being used to produce
paint or ink formulations which contain 10 percent or more, by
weight, water, or inks containing Magie oil and glycol as the
primary solvent.

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

Section 215.623 Permit Conditions

No person shall violate any condition in a permit when the condition results in exclusion of the plant or an emission source from this Subpart.

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

Section 215.624 Open-top Mills, Tanks, Vats or Vessels

No person shall operate an open-top mill, tank, vat or vessel, with a volume of more than 12 gallons for the production of paint or ink unless:

- a) The mill, tank, vat or vessel is equipped with a cover which completely covers the mill, tank, vat or vessel opening, except for an opening no larger than necessary to allow for safe clearance for a mixer shaft. Such cover shall extend at least $\frac{1}{2}$ inch beyond the outer rim of the opening or be attached to the rim.
- b) The cover remains closed, except when production, sampling, maintenance, or inspection procedures require access.
- c) The cover is maintained in good condition, such that when in place, it maintains contact with the rim of the opening for at least 90% of the circumference of the rim.

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

Section 215.625 Grinding Mills

- a) No person shall operate a grinding mill for the production of paint or ink which is not maintained in accordance with the manufacturer's specifications.
- b) No person shall operate a grinding mill fabricated or modified after the effective date of this Subpart which is not equipped with fully enclosed screens.
- c) The manufacturer's specifications shall be kept on file at the plant by the owner or operator of the grinding mill and be made available to any person upon verbal or written request during business hours.

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

Section 215.628 Leaks

The owner or operator of a paint or ink manufacturing plant shall, for the purpose of detecting leaks, conduct an equipment monitoring program consistent with the following:

- a) Each pump shall be checked by visual inspection each calendar week for indications of leaks, that is, liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, the pump shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected.
- b) Any pump, valve, pressure relief valve, sampling connection, open-ended valve, and flange or connector containing a fluid which is at least 10 percent by weight volatile organic material which appears to be leaking on the basis of sight, smell, or sound shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected.
- c) A weather proof, readily visible tag, in bright colors such as red or yellow, bearing an identification number and the date on which the leak was detected shall be attached to leaking equipment. The tag may be removed upon repair, that is, when the equipment is adjusted or otherwise altered to allow operation without leaking.
- d) When a leak is detected, the owner or operator shall record the date of detection and repair and the record shall be retained at the plant for at least 2 years from the date of each detection or each repair attempt. The record shall be made available to any person upon verbal or written request during business hours.

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

Section 215.630 Clean Up

- a) No person shall clean paint or ink manufacturing equipment with organic solvent unless the equipment being cleaned is completely covered or enclosed except for an opening no larger than necessary to allow safe clearance for proper operation of the cleaning equipment, considering the method and materials being used.
- b) No person shall store organic wash solvent in other than closed containers, unless closed containers are demonstrated to be a safety hazard, or dispose of organic wash solvent in a manner such that more than 20 percent by weight is allowed to evaporate into the atmosphere.

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

Section 215.636 Compliance Date

Owners and operators of emission sources subject to this Subpart shall comply with its requirements by April 1, 1989.

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

SUBPART PP: MISCELLANEOUS FABRICATED PRODUCT MANUFACTURING
PROCESSES

Section 215.920 Applicability

- a) The requirements of this Subpart shall apply to the following counties: Cook, DuPage, Kane, Lake, Macoupin, Madison, McHenry, Monroe, St. Clair and Will.
- b) The requirements of this Subpart shall apply to a plant's miscellaneous fabricated product manufacturing process emission sources which are not regulated by Subparts B, E, F, N, P, Q, R, S, U, V, X, Y, or Z if the plant is subject to this Subpart. A plant is subject to this Subpart if it contains process emission sources, not regulated by Subparts B, E, F, N, P, Q, R, S, U, V, X, Y, or Z, which as a group would emit 100 tons or more per year of volatile organic material if no air pollution control equipment were used.
- c) If a plant ceases to fulfill the criteria of subsection (b), the requirements of this Subpart shall continue to apply to a miscellaneous fabricated products manufacturing process emission source which was subject to and met the control requirements of Section 215.926.
- d) No limits under this Subpart shall apply to:
 - 1) Emission sources with emissions of volatile organic material to the atmosphere less than or equal to 1.0 ton per year if the total emissions from such sources not complying with Section 215.926 does not exceed 5.0 tons per year, and
 - 2) Emission sources whose emissions of volatile organic material are subject to limits in 35 Ill. Adm. Code 230 or 35 Ill. Adm. Code 231; or the Lowest Achievable Emission Rate, pursuant to 35 Ill. Adm. Code 203; or Best Available Control Technology, pursuant to 40 CFR 52.21 (1987) or Section 9.4 of the Act. The Board incorporates by reference 40 CFR 52.21 (1987). This incorporation includes no subsequent amendments or editions.

- e) For the purposes of this Subpart, an emission source shall be considered regulated by a Subpart if it is subject to the limits of that Subpart or it would be subject to the limits of that Subpart if the emission sources, emitting VOM, had sufficient size, throughput or emissions, or if the emission source did not meet a specific exemption contained in that Subpart.
- f) For the purposes of this Subpart, uncontrolled volatile organic material emissions are the emissions of volatile organic material which would result if no air pollution control equipment were used.

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

Section 215.923 Permit Conditions

No person shall violate any condition in a permit when the condition results in exclusion of the plant or an emission source from this Subpart.

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

Section 215.926 Control Requirements

- a) Every owner or operator of an emission source of volatile organic material shall operate in compliance with RACT, which for emission sources subject to this Subpart shall be:
 - 1) Emission capture and control techniques which achieve an overall reduction in uncontrolled volatile organic material emissions of at least 81%; or
 - 2) For coating lines, volatile organic material emissions not to exceed 0.42 kg/l (3.5 lb/gal) of coating materials as applied, excluding water and any compounds which are specifically exempted from the definition of volatile organic material, on a daily basis. Owners and operators complying with this subsection are not required to comply with Section 215.301; or
 - 3) An adjusted RACT emissions limitation obtained pursuant to Subpart I.
- b) Owners and operators of emission sources subject to this Subpart shall comply with its requirements by April 1, 1989.

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

SUBPART QQ: MISCELLANEOUS FORMULATION MANUFACTURING PROCESSES

Section 215.940 Applicability

- a) The requirements of this Subpart shall apply to the following counties: Cook, DuPage, Kane, Lake, Macoupin, Madison, McHenry, Monroe, St. Clair and Will.
- b) The requirements of this Subpart shall apply to a plant's miscellaneous formulation manufacturing process emission sources, which are not regulated by Subparts B, E, F, N, P, Q, R, S, U, V, X, Y, or Z if the plant is subject to this Subpart. A plant is subject to this Subpart if it contains process emission sources, not regulated by Subparts B, E, F, N, P, Q, R, S, U, V, X, Y, or Z, which as a group would emit 100 tons or more per year of volatile organic material if no air pollution control equipment were used.
- c) If a plant ceases to fulfill the criteria of subsection (b), the requirements of this Subpart shall continue to apply to a miscellaneous formulation manufacturing process emission source which was subject to and met the control requirements of Section 215.946.
- d) No limits under this Subpart shall apply to:
 - 1) Emission sources with emissions of volatile organic material to the atmosphere less than or equal to 2.5 tons per year if the total emissions from such sources not complying with Section 215.946 does not exceed 5.0 tons per year, and
 - 2) Emission sources whose emissions of volatile organic material are subject to limits in 35 Ill. Adm. Code 230 or 35 Ill. Adm. Code 231; or the Lowest Achievable Emission Rate, pursuant to 35 Ill. Adm. Code 203; or Best Available Control Technology, pursuant to 40 CFR 52.21 (1987) or Section 9.4 of the Act. The Board incorporates by reference 40 CFR 52.21 (1987). This incorporation includes no subsequent amendments or editions.
- e) For the purposes of this Subpart, an emission source shall be considered regulated by a Subpart if it is subject to the limits of that Subpart or it would be subject to the limits of that Subpart if the emission sources, emitting VOM, had sufficient size, throughput or emissions, or if the emission source did not meet a specific exemption contained in that Subpart.

- f) For the purposes of this Subpart, uncontrolled volatile organic material emissions are the emissions of volatile organic material which would result if no air pollution control equipment were used.

Source: Added at Ill. Reg. ,
effective)

Section 215.943 Permit Conditions

No person shall violate any condition in a permit when the condition results in exclusion of the plant or an emission source from this Subpart.

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

Section 215.946 Control Requirements

- a) Every owner or operator of an emission source of volatile organic material shall operate in compliance with RACT, which for emission sources subject to this Subpart shall be:
- 1) Emission capture and control techniques which achieve an overall reduction in uncontrolled volatile organic material emissions of at least 81%; or
 - 2) An adjusted RACT emissions limitation obtained pursuant to Subpart I.
- b) Owners and operators of emission sources subject to this Subpart shall comply with its requirements by April 1, 1989.

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

SUBPART RR: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING PROCESSES

Section 215.960 Applicability

- a) The requirements of this Subpart shall apply to the following counties: Cook, DuPage, Kane, Lake, Macoupin, Madison, McHenry, Monroe, St. Clair and Will.
- b) The requirements of this Subpart shall apply to a plant's miscellaneous organic chemical manufacturing process emission sources which are not regulated by Subparts B, E, F, N, P, Q, R, S, U, V, X, Y, or Z if the

plant is subject to this Subpart. A plant is subject to this Subpart if it contains process emission sources, not regulated by Subparts B, E, F, N, P, Q, R, S, U, V, X, Y, or Z, which as a group would emit 100 tons or more per year of volatile organic material if no air pollution control equipment were used.

- c) If a plant ceases to fulfill the criteria of subsection (b), the requirements of this Subpart shall continue to apply to a miscellaneous organic chemical manufacturing process emission source which was subject to and met the control requirements of Section 215.966.
- d) No limits under this Subpart shall apply to:
 - 1) Emission sources with emissions of volatile organic material to the atmosphere less than or equal to 1.0 ton per year if the total emissions from such sources not complying with Section 215.966 does not exceed 5.0 tons per year, and
 - 2) Emission sources whose emissions of volatile organic material are subject to limits in 35 Ill. Adm. Code 230 or 35 Ill. Adm. Code 231; or the Lowest Achievable Emission Rate, pursuant to 35 Ill. Adm. Code 203; or Best Available Control Technology, pursuant to 40 CFR 52.21 (1987) or Section 9.4 of the Act. The Board incorporates by reference 40 CFR 52.21 (1987). This incorporation includes no subsequent amendments or editions.
- e) For the purposes of this Subpart, an emission source shall be considered regulated by a Subpart if it is subject to the limits of that Subpart or it would be subject to the limits of that Subpart if the emission sources, emitting VOM, had sufficient size, throughput or emissions, or if the emission source did not meet a specific exemption contained in that Subpart.
- f) For the purposes of this Subpart, uncontrolled volatile organic material emissions are the emissions of volatile organic material which would result if no air pollution control equipment were used.

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

Section 215.963 Permit Conditions

No person shall violate any condition in a permit when the condition results in exclusion of the plant or an emission source from this Subpart.

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

Section 215.966 Control Requirements

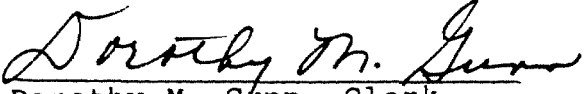
- a) Every owner or operator of an emission source of volatile organic material shall operate in compliance with RACT, which for emission sources subject to this Subpart shall be:
- 1) Emission capture and control techniques which achieve an overall reduction in uncontrolled volatile organic material emissions of at least 81%; or
 - 2) An adjusted RACT emissions limitation obtained pursuant to Subpart I.
- b) Owners and operators of emission sources subject to this Subpart shall comply with its requirements by April 1, 1989.

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

IT IS SO ORDERED.

J.D. Dumelle, R. Flemal, and M.L. Nardulli dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 7th day of April, 1988, by a vote of 4-3.


Dorothy M. Gunn, Clerk
Illinois Pollution Control Board