

ILLINOIS POLLUTION CONTROL BOARD
August 6, 1987

IN THE MATTER OF:)
)
VOLATILE ORGANIC MATERIAL) R82-14
EMISSIONS FROM STATIONARY)
SOURCES: RACT III)

PROPOSED RULE

SECOND NOTICE

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

This matter comes before the Board as part of a regulatory proposal initially filed by the Illinois Environmental Protection Agency ("Agency") on June 30, 1982, for the control of organic material emissions from selected industrial categories and generic sources. The particular proposal that is the subject of today's Opinion and Order regulates organic material emissions from one of these industrial categories, heatset web offset lithographic printing. Thirty-one hearings have been held, to date, regarding the entire R82-14 regulatory proposal. A number of these hearings have specifically addressed the heatset web offset lithographic printing category. An economic impact study (EcIS) was prepared specifically addressing this category (Ex. 71).

On August 10 and 22, 1984, the Board proposed regulatory language and a supporting opinion, respectively, for First Notice (hereinafter, the first First Notice). The first First Notice contained elements of the original Agency proposal, as well as language and modifications submitted by the Printing Industry of Illinois (PII). Public comments received during the first First Notice period cited many problems with the proposed rule and PII specifically requested an additional hearing (P.C. 54, 57 & 62). On May 30, 1985, the Board, noting the confusion and controversy associated with this category, acknowledged that the first First Notice rule needed revision and that the existing record needed to be supplemented. The Board proposed a second First Notice (hereinafter the second First Notice) for the purpose of generating comments and criticisms and authorized additional hearings.

Hearings solely addressing the heatset web offset category were held on April 1 and 2, 1986, in Chicago. On September 22, 1986, the Department of Energy and Natural Resources (DENR) filed a letter indicating that further economic impact assessment would not be undertaken by DENR for this particular category of rules, as a heatset web offset EcIS was already a part of the Board's record (P.C. 87). Final comments were received through September 29, 1986.

On April 30, 1987, the Board proposed regulatory language for a third First Notice (hereinafter, the third First Notice), which was published at 11 Ill. Reg. 10780, June 12, 1987. The statutory 45-day comment period ended on July 27, 1987. The U.S. Environmental Protection Agency (USEPA) filed comments on July 23, 1987 (P.C. 111). The Agency filed first notice comments, which were mailed July 27, 1987 (P.C. 112). The Administrative Code Unit of the Secretary of State's Office also filed comments regarding non-substantive format changes. Those format changes have been incorporated in the Second Notice Order.

A detailed discussion of the evidence and Board resolution of the issues is provided in the April 30, 1987, Opinion in this matter and will not be repeated here. The Board will respond to issues raised in the two substantive comments received during First Notice. Both the Agency and USEPA raised essentially the same substantive issues in the public comments. First, the commenters raised a concern that proposed Section 215.408(a)(1), which required the use of an incinerator connected to the dryer stack, contains no cap or upper limit on the percentage of VOM in the fountain solution. The commenters recommend a 12 percent cap. Second, the commenters maintain that the cap for fountain solution VOM in proposed Section 215.408(a)(2) should be seven percent rather than the proposed eight percent.

The Agency asserts that the Board's proposed Section 215.408(a)(1) does not provide "a high level of control" absent a cap of 12 percent on fountain solution VOM when an afterburner is used. The Board is at a loss to follow the logic of this position in light of the Agency's own persuasive evidence regarding the quantity of fountain solution VOM that is emitted in the press room and dryer. The Agency's Technical Support Document, Exhibit 28, states that 75 to 99.2 percent of the fountain solution VOM emissions occur in the dryer. This exhibit effectively refutes the 50 percent estimate in the terminated or withdrawn draft CTG for this category (Ex. 29(c)). Using the Agency's estimate, the Board made estimated calculations of the quantity of VOM emissions controlled by the two control alternatives in the proposed rule. The incinerator control option (with no fountain solution cap) resulted in a comparable, but generally higher, level of control than the fountain solution limitation/condenser option (R82-14, RACT III, April 30, 1987, Opinion, pp. 27-29). Far from not providing a "high level of control," the incinerator option provides the highest level of control due to the high capture efficiency provided by the use of a dryer directly connected to a high destruction efficiency incinerator. The Board, in its third First Notice Opinion, found that the use of a high efficiency incinerator without any cap on fountain solution VOM is RACT since pressroom emissions do not represent a large portion of total fountain solution VOM emissions. The Agency cites no credible evidence in support of a 12 percent cap, either in terms of print quality feasibility or

in terms of any significant impact on emissions. The Agency cites its own proposal and the terminated draft CTG as authority and requests that the Board disregard the Agency's own Exhibit 28 (P.C. 112, pp. 3-4).

Both the Agency and USEPA assert that nothing in the record before the Board supports eliminating the 12 percent proposal. The Agency and the USEPA misperceive the nature of the regulatory decision before the Board. Generally, proponents of regulatory language must create a record adequate to support their advocated position. There is no presumption of correctness afforded to an Agency proposal (or to any proposal). The Board must make a decision based solely on the record before it. The Board must weigh the relative merits and credibility of conflicting evidence. In this circumstance, the Board found that the Agency's evidence regarding the small quantity of pressroom emissions to be more credible and persuasive than the 50 percent figure in the terminated draft CTG. The Agency, in its comments, states that Exhibit 28 should not control because it is based on calculations rather than measurement. However, a review of the terminated draft CTG shows that the 50 percent figure is also based on calculation rather than measurement (Ex. 29e, pp. 2-18, Appendix A). In fact, Exhibit 28 is essentially a reworking of Exhibit 29e, Appendix A. However, the Agency corrected certain inaccurate assumptions made by USEPA.

Implicit in both the Agency's and USEPA's comments is the view that, somehow, the terminated draft CTG should be accorded greater weight than any other evidence developed in this regulatory record. This raises two sub-issues. The first issue is the value of the terminated draft CTG as evidence in this proceeding. The second issue is the legal import of the terminated draft CTG in light of the federal policy regarding RACT technical guidance. The Board believes that it is important to briefly review the history of the terminated heatset web offset draft CTG. While the wisdom and legal effect of the USEPA's policy of providing nearly irrebuttable RACT "guidance" to the states through final CTGs rather than federal rulemaking can be debated, the Board believes that federal technical support and guidance for the heatset web offset category have been pathetically deficient. The document was issued in draft form in 1981. After tremendous technical criticism, the draft document was terminated or withdrawn by letter (Ex. 24o). Since that time, the command from USEPA to regulate heatset web offset sources has been clear but the technical guidance has not. USEPA has attempted to "have its cake and eat it too." While unwilling to stand behind its own flawed technical guidance, USEPA expects that guidance to be slavishly followed and has made a veiled threat to disapprove the Board's latest proposed heatset web offset rule to the extent that it deviates from the terminated draft CTG (P.C. 111). Both in the letter terminating the draft CTG and in the latest comment to the Board, the USEPA continues

to trumpet the merits of the terminated draft CTG (Ex. 240, P.C. 111). Such a position is untenable.

Because of the deficiencies in USEPA technical guidance for this category, the Agency and the Board spent a great deal of time, effort and money to develop a sufficient factual record for reasoned rulemaking. The Board believes that it has proposed a good rule that represents RACT and is well supported by the record. The Agency has helped to fill the technical vacuum left by USEPA and has developed and submitted many original and well documented exhibits, such as Exhibit 28, in this proceeding. The Agency's attempt to disavow its own better evidence in favor of the now six year old, technically flawed, terminated draft CTG strains credibility.

In the final analysis, the Board must make an independent determination based solely on the record. It is the Board's duty to weigh evidence and regulate based on the evidentiary record. This is the legal context in which our decisions must be made and our decisions are reviewed by courts. The Board finds that there is nothing in the record supporting a cap of 12 percent. This limitation is arbitrary. The Agency has only cited its own proposal, which is not factual evidence and the terminated draft CTG. The basis, in the terminated draft CTG, for the 12 percent cap is non-existent. It is stated as a conclusion in Chapter 4.0 with no factual support or citation.

The Board's proposed rule, in contrast, is supported by a number of factual findings based on the record. First, the presumed status quo of fountain solution VOM is in the range of 15 to 25 percent. On an industry-wide basis this has been decreasing in recent years (R. 3956, testimony of John Reed). Consequently, pressroom emissions will also decrease. The best evidence shows that from 75% to 99.2% of the fountain solution VOMs are emitted in the drying process, rather than the pressroom (Ex. 28). An incinerator, directly connected to the dryer stack, ensures extremely high capture (R. 3941, testimony of John Reed regarding 100% capture of dryer emissions). The Board's estimated calculations of emissions and emission controls shows that the incinerator option (without a fountain solution cap) results in the highest level of control of the options provided (R82-14, RACT III, April 30, 1987, Opinion, pp. 27-29). The Agency and USEPA present no factual basis for their assertion that substantial pressroom emissions will occur. The appropriate standard is not whether there is evidence to support "elimination" of the 12 percent cap but whether there is any evidence to support such a cap. We find that there is not. Consequently, imposition of such a number would be arbitrary and capricious on the part of this Board.

The second area addressed by the commenters is the eight percent fountain solution VOM cap specified in proposed Section

215.406(a)(2). Both the Agency and USEPA contend that the fountain solution VOM cap should be seven percent. Once again, the source of this figure is the Agency's proposal and the terminated draft CTG (Ex. 29(c)). The Agency contends that the "only thing concrete" in the record is a letter from Terry Dwyer of Roberts and Porter, a supplier of fountain solution additives, to John Reed (Ex. 106(b)). That letter indicates that fountain solution isopropyl alcohol (IPA) can be reduced to five percent in most cases, if used in combination with IPA substitutes. The printing industry does not dispute this fact. However, the record indicates that all of the IPA substitutes are themselves VOMs (R. 4001-4006, 4064). Additionally, the record indicates that five percent IPA is feasible for the majority of printers only if IPA substitutes are permitted to the level of three percent. This VOM level ensures that the rule will be technically feasible for the entire Illinois industrial category, which utilizes numerous different dampening systems and produces a variety of different products on a job-shop basis (R. 4046-4047, 4155-4156). The Dwyer letter notes that there are limitations to the amount of IPA reductions technically possible for certain types of printing operations. The Dwyer letter makes no attempt to quantify the number of presses or press runs that can eliminate or reduce IPA below five percent. The Board finds that the Dwyer letter does not support the Agency's proposition that seven percent is technically feasible for the industry as a whole. The Dwyer letter, when appropriately limited by its own terms and by the sworn testimony in the record, is consistent with the proposed eight percent cap.

The Agency also cites the testimony of Gerry Bender of R.R. Donnelly & Sons as somehow supporting a cap of seven percent. On page six of Public Comment No. 112, the Agency quotes Mr. Bender's testimony that between 1.6 percent and 3.1 percent non-IPA substitutes needs to be added if the IPA content is reduced to the lowest possible level of five percent. The Agency states that Mr. Bender's testimony "supports seven percent as a cut off, as well as eight percent, and the Agency believes that the Board should adopt the lowest technically feasible numbers." The Agency then concludes with the request that "the limit for VOM content of fountain solution when using a condenser be changed from eight percent to seven percent as the record supports the seven percent limit." If Mr. Bender's testimony is going to be used as the support for a VOM limitation which applies to all sources within this industrial category, then it is logical to use the upper limit of eight percent which is technically feasible for all affected sources. This, then, would represent the "lowest technically feasible number", rather than the seven percent that the Agency believes it represents. Mr. Bender's testimony describes a technically feasible range for diverse dampening systems and products.

The Board finds that the record supports eight percent as a technically feasible limitation. As discussed previously, the Agency's own proposal and the terminated draft CTG provide no real basis for the seven percent figure.

Neither the USEPA or the Agency have presented any information or analysis regarding emissions in support of their position on the fountain solution VOM content. The Agency does make certain unsupported assertions that "significant" pressroom emissions will result absent adoption of tighter limitations. It is axiomatic that fewer emissions will occur if tighter limitations are imposed. This, of course, totally ignores the issue of whether the limitations are technically feasible or not. While the Board has found that the record does not support the limitations advocated by the Agency and USEPA, it is also apparent that the additional emission reductions contemplated are not significant. Using essentially the same assumptions in the emission reduction estimates in the Board's April 30, 1987, Opinion in this matter, the Board has calculated the overall VOM removal efficiency increases at issue. First, regarding the imposition of a 12 percent cap when an afterburner is utilized, the estimated overall VOM removal efficiency increases 5.2 percentage points. The imposition of a seven percent limitation rather than eight percent when a condenser is used results in an estimated overall VOM removal efficiency increase of 4.2 percentage points.

Regarding the legal import of the level of control specified in the terminated draft CTG, the Board found on April 30, 1987, and finds again today, that this document does not define RACT for this industrial category and that Illinois is not required to regulate this category by virtue of this document (R82-14, RACT III, April 30, 1987, Opinion, pp. 3-5, 24). At least at one time, even the Agency was in agreement with this position (R. 3984). The reason that this Board chose to regulate is because there are existing major stationary sources in non-attainment planning areas. Therefore, under the Clean Air Act, we must regulate. There is no RACT "presumption" created by the terminated draft CTG. Until USEPA stands behind the facts and conclusions in the terminated draft CTG by formally and finally adopting it, this Board cannot accept the specified levels of control as the presumptive RACT norm.

ORDER

The Board proposes the following amendments for Second Notice review by the Joint Committee on Administrative Rules.

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

PART 215
ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS

SUBPART P: PRINTING AND PUBLISHING

- Section
- 215.401 Flexographic and Rotogravure Printing
- 215.402 Exemptions
- 215.403 Applicability of Subpart K
- 215.404 Testing and Monitoring
- 215.405 Compliance Dates and Geographical Areas
- 215.406 Alternative Compliance Plan
- 215.407 Compliance Plan
- 215.408 Heatset Web Offset Lithographic Printing

Section 215.405 Compliance Dates and Geographical Areas

- a) Except as otherwise stated in subsection (b), every owner or operator of an emission source subject to: this Subpart shall comply with its standards and limitations by December 31, 1983.
 - 1) Section 215.401 shall comply with its standards and limitations by December 31, 1983; and
 - 2) Section 215.408 shall comply with its standards and limitations by December 31, 1987.
- b) If an emission source subject to Section 215.401 is not located in one of the counties listed below and is also not located in any county contiguous thereto, the owner or operator of the emission source shall comply with the requirements of this Subpart no later than December 31, 1987:

Cook	Macoupin
DuPage	Madison
Kane	Monroe
Lake	St. Clair

{Board Note: These counties are proposed to be designated as nonattainment by the USEPA (47 Fed. Reg. 31588, July 21, 1982)}

- c) Notwithstanding subsection (b), if any county is designated as nonattainment by the USEPA at any time

subsequent to the effective date of this Subpart, the owner or operator of an emission source located in that county or any county contiguous to that county who would otherwise be subject to the compliance date in subsection (b) comply with the requirements of this Subpart within one year from the date of redesignation but in no case later than December 31, 1987.

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

Section 215.407 Compliance Plan

- a) The owner or operator of an emission source subject to Section 215.405(a)(1) shall submit to the Agency a compliance plan, pursuant to 35 Ill. Adm. Code 201, Subpart H, including a project completion schedule where applicable, no later than April 21, 1983.
- b) The owner or operator of an emission source subject to Section 215.405(b) shall submit to the Agency a compliance plan, including a project completion schedule where applicable, no later than December 31, 1986.
- c) The owner or operator of an emission source subject to Section 215.405(c) shall submit a compliance plan, including a project completion schedule within 90 days after the date of redesignation, but in no case later than December 31, 1986.
- d) Unless the submitted compliance plan or schedule is disapproved by the Agency, the owner or operator of a facility or emission source subject to the rules specified in subsections (a), (b) or (c) may operate the emission source according to the plan and schedule as submitted.
- e) The plan and schedule shall meet the requirements of 35 Ill. Adm. Code 201, Subpart H, including specific interim dates as required in 35 Ill. Adm. Code 201.242.

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

Section 215.408 Heatset Web Offset Lithographic Printing


- a) No owner or operator of a heatset web offset lithographic printing facility, located in Cook, DuPage, Kane, Lake, Macoupin, Madison, McHenry, Monroe, St. Clair or Will County, emitting over 100 tons/year of organic material, in the absence of pollution control equipment, may cause or allow the operation of a heatset web offset press unless:

- 1) An incinerator system is installed and operated that oxidizes at least 90 percent of the organic materials (measured as total combustible carbon) in the dryer exhaust airstream to carbon dioxide and water; or
 - 2) The fountain solution contains no more than eight (8) percent, by weight, of volatile organic material and a condensation recovery system is installed and operated that removes at least 75 percent of the non-isopropyl alcohol organic materials from the dryer exhaust airstream.
- b) No owner or operator of a heatset web offset lithographic printing facility, located in a county other than Cook, DuPage, Kane, Lake, Macoupin, Madison, McHenry, Monroe, St. Clair or Will County, emitting over 100 tons/year of organic material, in the absence of pollution control equipment, may cause or allow the operation of a heatset web offset press unless the fountain solution contains no more than eight (8) percent, by weight, of volatile organic material.

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

IT IS SO ORDERED

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



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board