

ILLINOIS POLLUTION CONTROL BOARD  
May 25, 1978

IN THE MATTER OF: )  
 )  
PROPOSED AMENDMENTS TO CHAPTER ) R75-5  
2, PART II, SULFUR DIOXIDE ) R74-2  
EMISSIONS )

ORDER OF THE BOARD (by Mr. Goodman):

The Board hereby orders that the Board's Memorandum concerning the Proposed Final Draft Order in these proceedings be made available for public inspection.

Mr. Young abstains.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Order was adopted on the 25<sup>th</sup> day of mg, 1978 by a vote of 4-0.

Christan L. Moffett  
Christan L. Moffett, Clerk  
Illinois Pollution Control Board

ILLINOIS POLLUTION CONTROL BOARD

R75-5, R74-2  
SULFUR DIOXIDE EMISSIONS  
MEMORANDUM

This memorandum is intended to highlight and explain the differences between the Board's recent proposed Final Draft Order in R75-5, Sulfur Dioxide Emissions, and the Agency's January 6, 1978 Proposal. The memorandum is not intended to constitute the Board's final Opinion in this matter.

The original Agency proposal called for deletion of the 6.0 lbs./MMBTU standard of Rule 204(c)(1)(B)(i). The Agency contended that the degree of sulfur reduction achieved by coal washing did not support this limitation. This contention, however, was not substantiated in the record. The Board has decided to retain a lbs./MMBTU standard but to loosen it slightly, which will greatly increase the percentage of Illinois coal which can be burned without washing. Hence, a new standard of 6.8 lbs./MMBTU is proposed. Coal washing remains a viable technique for reducing total emissions. Furthermore, later versions of the Agency's proposal included a provision intended to operate as a cap on existing emissions. The intent was to prevent unnecessary increases in emissions. There is no cap provision in the proposed Order. Retention of a lbs./MMBTU standard will thus act as a gross cap rule on emissions.

The mass emission limitation of Rule 204(e)(1) remains basically as it was in the Agency's proposal with a few editorial changes. The 204(e)(1) formula represents the state of the art and is generally an improvement over the existing Rule 204(e) formula. The input parameters in the formula have been converted to the English (foot/pound/second) system. An addendum attached to the Order contains the original formula in the metric system. The formula is proposed for public comment in both systems so that the Board can incorporate in the final regulation whichever the public prefers.

Since the Rule 204(e)(1) formula limits the quantity of SO<sub>2</sub> emissions, the Rule has been modified to specify that the operating conditions to be used in calculating the emission limit are those which would produce maximum emissions. The Agency testified that it intended the weighting factor, P (the percentage of total emissions), to be determined under operating conditions which would lead to maximum emissions. This intention has been incorporated into the rule, and the Rule has been changed to specify that stack gas exit velocity (V) and stack gas temperature (T) input parameters should also be determined under those conditions. This definition of input parameters would take into account normal variations in sulfur content of fuel, the use of pollution control equipment, and boiler firing capacity.

Proposed Rule 204(e)(2) was devised so that sources that had made a good faith effort and come into compliance with the existing Rule 204(e) or a Board Order but would not be in compliance with proposed 204(e)(1) would not be penalized. Such sources are given their choice of the existing Rule 204(e) formula or the proposed Rule 204(e)(1). A recent past date (April 1, 1978) was chosen as the date for compliance so that only sources which had complied in good faith and not at the last minute in order to receive a lower standard would be eligible. Furthermore, the phrase "during peak periods resulting from normal cyclical variations" has been used to describe the conditions under which a source must be unable to comply with the Rule 204(e)(1) formula in order to qualify for (e)(2). (NOTE: The Proposed Final Draft Order entered on May 11, 1975, read "normal cyclical operations"; the phrase should have been "normal cyclical variations".) Recognizing that firing rate and, consequently, emissions vary within any given year for many sources, the Board has included this phrase in order to exclude peak emissions that may occur due to a process upset or other abnormal operating conditions or due to an effort by a source to increase its emissions in order to qualify for a Rule 204(e)(2) emission limitation. The Board has also added a requirement that any source which opts to comply with the existing Rule 204(e) formula reapply to the Agency for its operating permit within 60 days of the effective date of Rule 204(e)(1). The Board notes that, although a source may be allowed a looser standard pursuant to this Rule 204(e)(2), it still may not cause or contribute to a violation of any air quality standard.

Rule 204(e)(3) embodies the concept of what was Rule 204(e)(2) in the Agency's proposal, although the approach differs from the Agency's approach. During the hearing process, it was pointed

out that the Rule 204(e)(1) formula might not be the most appropriate formula for all sources, due to differences in plume rise and/or meteorology. Hence, the Agency amended its proposal to provide a means by which a source could obtain an emission limitation based on the specific characteristics of its site. The Agency proposed that this "alternate emission standard" be determined through the permit process. However, the Board proposes that such a determination be accomplished through a petition and adjudicative hearing before the Board, with the Agency a party to such proceeding. A hearing and decision by the Board satisfies several concerns expressed by various groups during the hearings: it allows for full public input into the determination before the decision is made; it satisfies U.S. EPA's requirement that any grant of an "alternate emission standard" fulfill the federal hearing requirements and be submitted as a SIP revision; and it is consistent with the policy in the Environmental Protection Act that the Board carry out standard-setting functions.

Since it is recognized that the 204(e)(3) alternate emission limit will most likely be less stringent than the limit under 204(e)(1), 204(e)(3) requires that a source prove that it will not, under worst case conditions, cause or contribute to a violation of air quality standards. Such proof shall include modeling and monitoring of air quality in the area surrounding the source, both in order to obtain the standard and for one year after the standard is granted. The Board intends to promulgate Part X of the Procedural Rules which will join the Agency as a party, provide for the possibility of an Agency Recommendation, require the source to meet certain requirements in submitting its petition including much of what was in the Agency's proposed guidelines (Exhibit 64), and set out other applicable procedures.

Rule 204(f)(1)(D) is modified as was suggested in the Agency's proposal. The Board has chosen not to propose the modification to Rule 204(g)(3) which was suggested in the Agency's proposal because it is no longer relevant.

Rule 204(h), Compliance Dates, remains basically as it was in the Agency's proposal. The sections allowing sources in compliance with the existing Rule 204(e) three years to comply with either 204(e)(1) or an alternate emission standard under 204(e)(3) have been modified to clarify that, in order to qualify for this delayed compliance date, compliance with the existing 204(e) must be continuously maintained until the stricter limit is reached. The Board notes that our intent is that no source, even a source which

is in compliance with the existing 204(e) and applies for and obtains an (e)(3) alternate standard, be allowed to emit more than that allowed under Rule 204(e)(1) once three years from the effective date of that Rule has passed, unless the source is in compliance with 204(e)(2) or 204(e)(3).

The Board has incorporated Rule 204(i), Intermittent Control Systems (ICS), as proposed by the Agency with two modifications. The version of this Rule contained in the Agency's latest proposal would have applied to all sources, while the ICS Rule in the Agency's previous versions of the proposal would have only applied to sources outside the Chicago, St. Louis and Peoria Major Metropolitan Areas (MMA's). The Board has limited the ICS Rule to sources outside these MMA's because it is only these sources which would have had notice of the proposed rule and, therefore, would have had an opportunity to participate in the hearings. Furthermore, requiring an ICS in an urban area with multiple sources would not appear to be viable because of the difficulty of determining liability for air quality violations. Also, the Rule has been modified to specify that the Agency may only require installation of an ICS as a permit condition if necessary to prevent the source from causing or contributing to an air quality violation.

Rule 204(j), Dispersion Enhancement Techniques, has also been slightly modified both editorially and substantively in the Board's proposed Order. As proposed by the Agency, this Rule could have precluded a source from receiving credit in Rule 204(e) for any increase in stack height. Several sources complained during the hearings that such a rule is more restrictive than Section 123 of the Clean Air Act Amendments, which would appear to allow credit for an increase in stack height up to good engineering practice. The Board has, therefore, redrafted this Rule to provide that only increases in stack height in "excess of good engineering practice necessary to prevent downwash or fumigation conditions" shall be considered a dispersion enhancement technique and, therefore, not a permissible means of attaining compliance with Rule 204(e). Also, the phrase "except as provided in Section 123 of the Clean Air Act" has been included to specify that any inconsistency between this Rule and the Clean Air Act be resolved in favor of the Clean Air Act.

Finally, the Board has proposed to adopt the Agency's modification of the definition of "Air Pollution Control Equipment" in Rule 101 to include intermittent control systems. Defining ICS as air pollution control equipment means that any source ordered to install an ICS must apply to the Agency for construction and operating permits for such system.