

ILLINOIS POLLUTION CONTROL BOARD
June 21, 1990

IN THE MATTER OF:)
)
PROPOSED AMENDMENTS TO) R87-31
PART 214, MEASUREMENTS) (Rulemaking)
METHODS FOR EMISSIONS)
OF SULFUR COMPOUNDS)

PROPOSED RULE. FIRST NOTICE

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

This proposed regulation involves amendments to 35 Ill. Adm. Code 214 Sulfur Limitations, Section 214.101, Measurement Methods. The Illinois Environmental Protection Agency ("Agency") proposed the amendments in response to objections raised by U.S. Environmental Protection Agency ("USEPA") to the Illinois State Implementation Plan ("SIP") for sulfur dioxide. Subsection (a) of the rulemaking affects the stack testing measurement techniques for sulfur dioxide emissions from stationary sources and the balance of the rule primarily governs measurement methods for solid fuels. Affected sources include public utilities, private businesses, and various other entities in Illinois.

Procedural History

The proposed amendments to Part 214, concerning measurement methods for emissions of sulfur compounds, were filed by the Agency on August 24, 1987. Merit hearings were held on October 23, 1987 in Chicago and on November 6, 1987 in Springfield. On November 9, 1987, the Agency's First Amended Proposed regulation and Statement of Reasons was filed. On January 1, 1988, a letter from the Department of Energy and Natural Resources ("DENR") was filed which acknowledged that an Economic Impact Study ("EcIS") would be undertaken. The EcIS, entitled The Economic Impact of Revised Measurement Methods for Emissions of Sulfur Compounds, Proposed Regulations R87-31, was filed on June 9, 1989. The Economic and Technical Advisory Committee ("ETAC") opinion approving the EcIS was filed on July 6, 1989. EcIS hearings were held on September 8, 1989 in Chicago and on September 19, 1989 in Springfield. On June 11, 1990, the Agency filed its amended proposal setting forth the rule as currently proposed.

The Board notes that Deborah Stonich, who is presently on the Board staff, previously represented the Agency in this proceeding. Ms. Stonich did not participate in any of the Board's deliberations on the proposed amendment since joining the Board.

Background

The central issue concerning the proposed rule arose from the refusal of USEPA in 1985 to accept the sulfur dioxide emission limitations in the Illinois State Implementation Plan ("SIP"). USEPA required that Part 214.101, Measurement Methods, be revised to assure short-term compliance with the National Ambient Air Quality Standard ("NAAQS") for sulfur dioxide. (See Merit Hearings, Exhibit 8, 1985.) USEPA maintained that stack testing should be included in measurement methods to determine short-term compliance. The two month averaging method of existing Section 214.101 was considered inadequate to establish short-term compliance, i.e., 3-hour and 24-hour compliance. Stack testing is USEPA's preferred method to evaluate short-term compliance.

The Agency estimated that 87 facilities would be affected by the rulemaking. DENR revised this number downward to 78, of which 52 facilities would be required to make some changes in their existing practices. (See EcIS discussion below.)

Introduction

The proposed amendments to Section 214.101 are intended to address USEPA's objections by providing that compliance shown by coal sample averaging techniques could not be used to refute evidence of non-compliance shown by stack testing, and vice versa. Specifically, the applicable proposed language states: "A determination of non-compliance based on any subsection of this Section shall not be refuted by evidence of compliance with any other subsection." Thus, stack testing, if required by the Agency, would be given controlling weight if stack testing revealed non-compliance. The Agency also proposes to add USEPA approved Methods 6A, 6B, and 6C, found at 40 CFR 60, Appendix A, to supplement the existing Method 6 stack testing procedure.

Section 214.101 would also be amended to specify the methods and frequency of regular analysis of coal samples, based on the facility's capacity to produce sulfur emissions. That capacity would be expressed in terms of total solid fuel-fired heat input capacity, measured in mega watts (MW) or millions of British thermal units per hour (MBtu/hr). Facilities were not previously categorized in this way, but now each would fall into one of four groups, with corresponding testing requirements. For discussion purposes, these facilities may be categorized as follows:

<u>Category</u>	<u>Capacity</u>	<u>Proposed Frequency of Analysis</u>
Category 1	more than 439.5 MW (1,500 MBtu/hr)	Daily analysis [Section 214.101(c)]
Category 2	146.5 - 439.5 MW (500 - 1,500 MBtu/hr)	Weekly analysis of daily samples [Section 214.101(d)]
Category 3	14.65 - 146.5 MW (50-500 MBtu/hr)	Monthly analysis of daily samples [Section 214.101(e)]
Category 4	less than 14.65 MW (50 MBtu/hr)	Monthly average [Section 214.101(f)]

Under the existing rule, the measurement method for all facilities is the same. Existing Section 214.101(a) provides for stack testing in accordance with USEPA approved Method 6, found at 40 CFR 60 (1982), or procedures specified by the Agency, and existing Section 214.101(c) provides for two-month averages of coal samples. This second method demonstrates compliance by calculating a two-month average of daily samples of low sulfur fuel when 95% of the samples are no greater than 20% above the average. Stack testing is rarely performed, and the two-month average of coal samples (sometimes in the record referred to as a 60-day average) is the method ordinarily used to show compliance with sulfur emissions limitations.

As discussed in the EcIS summary below, the proposed rule would entail more frequent coal sampling and analysis than some facilities previously performed. The EcIS concludes that this would involve only modest cost increases over amounts already spent for current procedures. These incremental costs represent one issue in this rulemaking.

Another issue is the increased importance of stack testing under the proposed rule. This USEPA requirement gave rise to many questions pertaining to the costs and anticipated frequency of such stack tests. However, whether the rule should be amended to satisfy USEPA is not at issue. The record shows that even the alternative proposal submitted by the Illinois Environmental Regulatory Group ("IERG") provides the same language that would prevent refuting stack test results showing non-compliance by evidence of compliance shown by sampling and analysis. The record gives much support for the proposition that stack testing has been, and would remain, an infrequently used testing method.

IERG's alternative proposal would maintain the existing rule in other respects and add Agency permit conditions as the vehicle

for making changes in sampling and analysis procedures. This concept was rejected by the Illinois Coal Association, which favored the predictable specified averaging requirements. Such known regulatory standards would be useful in contracting for coal requirements.

Proposed Regulation

The Board's First Notice proposed rulemaking is based primarily on the Agency's Amended Proposal filed June 11, 1990. Section 214.101 would be revised and expanded as noted below. Incorporation by reference for cited materials (i.e., 40 CFR and ASTM methods) requires amendments to 35 Ill. Adm. Code 214.104, which are also detailed below. Minor language changes were made by the Board and these changes are discussed later.

Section 214.101 Measurement Methods

A determination of non-compliance based on any subsection of this Section shall not be refuted by evidence of compliance with any other subsection.

- a) Sulfur Dioxide Measurement. Measurement of sulfur dioxide emissions from stationary sources shall be made according to the procedure published an applicable method specified in 40 CFR 60, Appendix A, Method 6, 6A, 6B, or 6C (1982), incorporated by reference in Section 214.104(a), or by measurement procedures specified by the Illinois Environmental Protection Agency Agency according to the provisions of 35 Ill. Adm. Code 201 pursuant to 40 CFR 60.8(b), incorporated by reference in Section 214.104(b).
- b) Sulfuric Acid Mist and Sulfur Trioxide Measurement. Measurement of sulfuric acid mist and sulfur trioxide shall be according to the barium-thorin titration method as published specified in 40 CFR 60, Appendix A, Method 8 (1982), incorporated by reference in Section 214.104(a).
- c) Solid Fuel Averaging Measurement Daily Analysis Method. This subsection applies to sources at plants with total solid fuel-fired heat input capacity exceeding

439.5 MW (1500 million Btu/hr). If low sulfur solid daily fuel analysis is used to comply demonstrate compliance or non-compliance with Sections 214.121, 214.122, 214.141, 214.142(a), 214.162, 214.186 and 214.421, the applicable solid fuel sulfur dioxide standard hourly emission rate or emission rate expressed as kg/MW-hr (pounds per million Btu) shall be met by considered to be the result of a any consecutive two month average of daily samples with provided no more than 95 percent of the samples being values are no greater than 20 percent above the sample average. If samples from a source cannot meet this statistical criterion, each individual daily sample analysis for such source shall be compared to the standard to determine compliance. The specific ASTM procedures, incorporated by reference, in Section 214.104(c) shall be used for solid fuel sampling, sulfur and heating value determinations.

d) Weekly Analysis Method. This subsection applies to sources at plants with total solid fuel-fired heat input capacity exceeding 146.5 MW (500 million Btu/hr) but not exceeding 439.5 MW (1500 million Btu/hr). These plants shall demonstrate compliance or non-compliance with Sections 214.122, 214.141, 214.142(a), 214.162, 214.186 and 214.421 by either an analysis of calendar weekly composites of daily fuel samples or by compliance with Subsection (c) above, at the option of the plant. The specific ASTM procedures incorporated by reference in Section 214.104(c) shall be used for sulfur and heating value determinations.

e) Monthly Analysis Method. This subsection applies to sources at plants with total fuel-fired heat input capacity exceeding 14.65 MW (50 million Btu/hr) but not exceeding 146.5 MW (500 million Btu/hr). These plants shall demonstrate compliance or non-compliance with Sections 214.122, 214.141, 214.142(a), 214.162, 214.186 and 214.421 by either an analysis of calendar monthly composites

of daily fuel samples or by compliance with Subsection (c) above, at the option of the plant. A.S.T.M. procedures shall be used for sulfur and heating value determinations.

- f) Small Source Alternative Method. This subsection applies to sources at plants with total solid fuel-fired heat input capacity not exceeding 14.65 MW (50 million Btu/hr). Compliance or non-compliance with Sections 214.122, 214.141, 214.142(a), 214.162, 214.186 and 214.421 shall be demonstrated by a calendar month average sulfur dioxide emission rate.
- g) Exemptions. Subsections (c) through (f) shall not apply to sources controlling sulfur dioxide emissions by flue gas desulfurization equipment or by sorbent injection.
- h) Hydrogen Sulfide Measurement. For purposes of determining compliance with Section 214.382(c), the concentration of hydrogen sulfide in petroleum refinery fuel gas shall be measured using the Tutwiler Procedure specified in 40 CFR 60.648 (~~1986~~), incorporated by reference in Section 214.104(d)

In order to incorporate the references to technical materials noted in the proposed Section 214.101, the Board proposes to amend Section 214.104 as follows:

Section 214.104 Incorporations by Reference

The following materials are incorporated by reference. These amendments do not include any later amendments or editions.

- a) 40 CFR 60, Appendix A (~~1982~~) (1989):
 - 1) Method 6: method for measurement Determination of Sulfur Dioxide Emissions; From Stationary Sources;
 - 2) Method 6A: Determination of Sulfur Dioxide, Moisture, and Carbon Dioxide Emissions From Fossil Fuel Combustion Sources;

- 3) Method 6B: Determination of Sulfur Dioxide and Carbon Dioxide Daily Average Emissions From Fossil Fuel Combustion Sources;
 - 4) Method 6C: Determination of Sulfur Dioxide Emissions From Stationary Sources (Instrumental Analyzer Procedure); and
 - 2)5) Method 8: barium-thorin titration method- Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions From Stationary Sources.
- b) 40 CFR 60.8(b) (1989), Performance tests.
- bc) American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103:
- 1) For solid fuel sampling:
 - ASTM D-2234 ~~(1976)~~ (1986)
 - ASTM D-2622 (1976)
 - ASTM D-2013 (1986)
 - 2) For sulfur determinations:
 - ASTM D-3177 ~~(1976)~~ (1984)
 - ASTM D-2013 ~~(1982)~~
 - ASTM D-3180 (1984)
 - ASTM D-4239 (1985)
 - 3) For heating value determinations:
 - ASTM D-2015 ~~(1976)~~ (1985)
 - ASTM D-3286 ~~(1976)~~ (1985)
- ed) Tutwiler Procedure for hydrogen sulfide, 40 CFR 60.648 ~~(1986)~~ (1989).

Merit Hearings

At the merit hearing held on October 27, 1987 in Chicago, USEPA explained its objection to the existing rule and strongly recommended adoption of the proposed amendments. Transcript (Tr.) of November 10, 1987, pp. 9-12; Exh. 1 and 2. The Agency fully described the proposed revisions and the rationale for the revisions and also commented that it received little negative response after notifying all known affected facilities. The Agency referred to various benefits of adopting the proposed amendments, including better air quality protection from routine monitoring; clarity and consistency with Agency practices; uniform enforcement; and USEPA approval. Tr., supra, pp. 19-40. The Agency also testified that "[n]o Illinois coal is likely to be displaced as a result of the proposed changes." Tr., supra, pp. 53, 58. The Agency explained how a two-month standard, in practice, may represent the most current two-calendar months of data if used for permit renewal, or may be a 60-day "rolling average" if continuing compliance is being considered. Tr., supra, p. 64. The methods of sampling and analysis and the probable frequency of stack testing were discussed in detail. Tr., supra, pp. 89-96. The largest facilities, in Categories 1 and 2, would use ASTM procedures for sampling, sulfur, and heating value determinations. ASTM sampling procedures would not be required of the smaller facilities. Stack testing, if required at all, would most likely be required when a permit is renewed. Various references were also made to other pending state air regulations which were dependent on the the proposed sulfur regulations. See. e.g., Tr., supra, at pp. 12, 44, 45, 73. The Agency emphasized that the proposed regulation would reflect current Agency practices, with more stringent testing being required of the largest potential pollution sources. IERG participated in the hearing with questions to the Agency on a variety of subjects.

At the second merit hearing held on November 6, 1987 in Springfield, the Agency presented its amended proposal and IERG presented an alternative proposal. The Coal Association also testified as to the impact of both proposals on Illinois coal producers.

The Agency modified its proposal with regard to ASTM testing procedures based on input from a member of the Coal Association. The revised proposal would not require ASTM sampling procedures for Category 2 facilities. Technical problems and costs would not seem to justify requiring such sampling procedures. Another revision calls for ASTM procedures for sulfur and heating value determinations to be required for Categories 1, 2 and 3, that is, all facilities with solid fuel-fired heat input capacity exceeding 50 MBtu/hr. Dr. Harish Rao had raised a question regarding ASTM procedures at the prior hearing which prompted this revision. The smallest facilities

(Category 4) would not be required to test according to ASTM procedures.

IERG's testimony and presentation of its alternative proposal focused on limiting amendment of Section 214.101 to only those changes required to satisfy USEPA. See Tr. of November 6, 1987, pp. 17-18. IERG deleted reference to Method 6 in the reference to 40 CFR stack testing methods since more than one method could be used to satisfy stack test requirements. IERG also stated that "we would urge in its opinion to remind the Agency of its own statements and of the constraints of reasonableness" on requiring stack testing. Tr., supra, at p. 19. IERG proposed extensive revision to the Agency's proposed Subsection C fuel averaging rule. Essentially, IERG proposes that all regulatory standards be stated uniformly for facilities of all sizes and that the Agency rely on the permitting process to regulate emissions. IERG argues that USEPA's interpretation of Illinois' fuel averaging rules has differed from the state agency's interpretation. USEPA's enforcement actions have allegedly resulted in a "cost and burden on Illinois sources [which] would also lead us to the conclusion to eliminate altogether from the Illinois regulations any compliance method based on fuel averaging." Tr., supra, at pp. 20, 21. IERG, however, acknowledged that continuing compliance can efficiently be monitored through fuel averaging requirements. Therefore, IERG suggested that the SIP should not include these requirements to "eliminate the issuance of notices of violation by USEPA based on that data," Tr., supra, p. 22, and permit conditions could be the vehicle for state imposition and enforcement of fuel averaging requirements. IERG suggested that this would provide needed flexibility to the Agency. IERG also recommended a regulatory constraint on the Agency to maintain the status quo. Tr., supra, pp. 24-25. As proposed by IERG, Section 214.101 would read as follows:

Section 214.101 Measurement Methods

A determination of non-compliance based on any subsection of this Section shall not be refuted by evidence of compliance with any other subsection.

- a. Sulfur Dioxide Measure. Measurement of sulfur dioxide emissions from stationary sources shall be made according to an appropriate procedure in 35 Ill. Adm. Code 230, Appendix A, published in (40 CFR 60, Appendix A) (1986).
- b. Sulfuric Acid Mist and Sulfur Trioxide Measurement. Measurement of sulfuric acid mist and sulfur trioxide shall be

according to the barium-thorin titration method of 35 Ill. Adm. Code 230, Appendix A, Method 8 (40 CFR 60, Appendix A, Method 8) (1986).

- c. Solid Fuel Analysis Method. The Agency may impose, as a permit condition, reasonable and appropriate fuel sampling, analysis and reporting requirements, including reasonable and necessary averaging provisions. No such permit condition shall cause any applicable emission limitation to be significantly more restrictive or impose significantly increased sampling, analysis and reporting burdens than allowed under the prior Section 214.101(c).

In the event that the Board should chose to adopt the Agency's approach to Section 214.101, IERG raised various concerns. Questions arose on whether to include all the various stack testing methods in 40 CFR, on the impact of new sampling and analysis requirements, and on the meanings of "daily" sampling and "capacity" of a facility. These issues seem to have been addressed later in this hearing and in the EcIS and the EcIS hearings.

Later testimony by the Agency in this merit hearing highlighted the difficulties of relying solely on the permitting process and the possibilities of considerable litigation based on the rule as proposed by IERG. Testimony on behalf of the Coal Association by Peabody Holding Company's Director of Research and Technology also presented support for coal sampling as a means to show compliance. The Coal Association recommended adoption of the Agency's subsections (e), (f), and (g) as proposed and adoption of the other sections with minor changes. Tr., supra, pp. 40-72. The coal industry expressed concern over the uncertainty of permit conditions and their susceptibility to change. Tr., supra, p. 59. The Coal Industry also asserted that "the coal supplier is the party that will ultimately be required to comply with the provisions of Part 214." Tr., supra, at p. 41.

Other testimony at the November 7, 1987 hearing provided some explanation as to how the Agency applied the regulation's two-month averaging rule. Currently, and as proposed, this language is interpreted to mean 60 consecutive days of operations from which samples and analyses are drawn. As applied, then, the requirement, that 95% of the samples fall within 120% of the average, means that not more than 5% of 60 days or three days' samples could exceed the average values by more than 20%. Tr., supra, pp. 76-77.

The balance of testimony focused on issues of cost to be more fully developed later in the proceeding. They also clarified that daily fuel samples meant "one representative sample of the day's fuel that's burned in the plant." Tr., supra, at p. 86. See also pages 86-92. Reporting requirements, which are not covered by the proposed regulation, were also discussed. Tr., supra, pp. 92-95. Various questions arose considering implementation of sampling and analysis requirement of reporting that information. Tr., supra, pp. 92-116. The testimony conveyed that the Agency has authority presently to require stack tests and two-month averaging, and reporting requirements are set, and would be set, for each individual facility and structured as part of its permit, and not as part of the regulations.

EcIS Summary

The EcIS prepared by DENR and filed on June 6, 1989 (with concurring ETAC Opinion filed on July 6, 1989) concluded that the proposed rule would have minimal economic impact. The study found that although Agency records suggested that 87 facilities would be affected, closings of facilities or operational changes reduced the number to 78 facilities. Further reductions were attributable to the fact that the 25 smallest facilities (with solid fuel-fired heat input capacity not exceeding 50 MBtu/hr) would not be required to alter their sulfur measurement practices. Thus, only 52 facilities were found to be directly affected by the proposed rule changes. These facilities included six large public utilities, private businesses, and small institutions such as schools. Of the affected facilities, 21 facilities "would make changes under the new rule that would increase operating costs." (EcIS, p. 42.) Eighteen (18) of these facilities would fall in Category 3 above, and three facilities would be in Category 2 above. Some Category 2 and Category 3 facilities would incur increased costs due to more frequent analyses and more frequent coal sampling than previously done. Weekly or monthly analyses and daily feed samples would be required for these facilities under the proposed rule. The largest facilities already collect daily feed samples and would not need to alter current practices. Facilities which sampled coal shipments, rather than daily feed samples, would be required to adopt the new practice.

DENR concluded that the incremental labor and equipment costs associated with complying with the rule were modest. The aggregate cost to facilities ranged from \$31,000 to \$100,900 for changes in the type and frequency of sampling and analysis of coal. The average cost-per-facility for the 21 facilities most affected by the rule change was estimated to be in the \$1,500 to \$5,000 range. The high cost range for an individual facility could vary from \$600 to \$15,000. (EcIS, p. 42, 43.) Stack tests, if requested at all by the Agency, were estimated as

costing in the range of \$3,000 to \$10,000. No measurable employment impact was expected in conjunction with these modest costs.

The rule would not be the basis for any quantifiable improvements in air quality. The benefits would be in terms of greater assurance of compliance with the national short-term sulfur dioxide standard. The study anticipated no greater occurrence of violations as a result of new or more frequent testing, with the possible exception of state-operated facilities. (EcIS, p. 49.)

Hearings on the EcIS

At the EcIS hearing held on September 8, 1989 in Chicago, DENR's witness explained much of the research and methods used to develop the EcIS. The Agency clarified that the daily coal sampling was not of incoming shipments, but rather, was sampling of the coal being burned that day. DENR's witness confirmed that it was on this basis (i.e., daily sampling of coal being burned) that it calculated the costs to be incurred as a result of the new rule. DENR also made clear that it did not extensively research stack testing costs, notably because of the low probability that it would be used. Stack testing costs, therefore, were not included in the \$31,000 to \$100,900 aggregate costs to facilities to implement the new rules. The Agency also indicated that stack testing was rarely required, and that the Agency policy on stack testing would not be expected to change.

At the continued EcIS hearing held on September 19, 1989 in Springfield, a DENR witness submitted the economic model used in part of the EcIS and clarified that the EcIS did not contain an assumption that more frequent coal sampling would eliminate the necessity for stack testing. An Agency representative also addressed an earlier question regarding "standby capacity." Transcript (Tr.) of September 19, 1989, p. 9. The Agency explained "that it does not intend to count those boilers on a facility's property that are never used" when the Agency considers the capacity of a facility (and, therefore, the applicable testing requirements). Supra, at p. 9. The Agency also responded to other earlier questions, including the issue of stack testing. On this important issue, the Agency stated as follows:

[T]he Agency would like to state that it is unlikely that it will require routine stack tests in the future. The possibility of routine stack tests should be minimal since the Agency has not required them in the past even though it has had the ability to do so pursuant to the testing and monitoring provisions contained in Section 201.182(a) and (b) of the Air Pollution Regulations.

Tr., Sept. 19, 1989, p. 10.

Conclusion

The Agency and the Illinois Coal Association have presented a persuasive case. Therefore, the Board will propose for First Notice the amendments to Part 214, Measurements Methods for Emissions of Sulfur Compounds, substantially as requested by the Agency. Several considerations were relevant to the Board's decision.

First, the Board is cognizant of the need to address USEPA's objections to the Illinois SIP. The participants in this regulatory proceeding agree that stack testing must be given greater prominence as the means to show short-term compliance with the sulfur emissions standards. Thus, the amendment of Section 214.101 with respect to stack testing is not controverted.

The first sentence in Section 214.101 and amendments to 214.101(a) are intended to meet the federal requirement regarding stack testing. While the Board finds this language generally acceptable, the Board requests that the participants address USEPA's suggestion at hearing that, the language, "[d]etermination of compliance and non-compliance shall be made according to the methods of this section," be substituted in place of the proposed amendment. Tr., Oct. 27, 1987, p. 11. Furthermore, the Board requests that the participants respond as to why they believe the proposed amendments would be federally approved absent USEPA's suggested language.

Second, the Board notes that Section 214.101(a) specifies alternative stack testing methods found in 40 CFR 60, Appendix A, Methods 6A, 6B and 6C. Additionally, Section 214.101(a) makes reference to other procedures specified pursuant to 40 CFR 60.8(b). This means that alternative procedures would first be federally prescribed rather than prescribed solely in accordance with the Illinois Administrative Code, as the regulation presently provides. The Board agrees with the concept of making reference to federally approved procedures, but asks the Agency and any other participants to comment on how 40 CFR 60.8(b) would be employed to develop alternative procedures to test emissions.

Third, the Board agrees that the Agency and the Illinois Coal Association have articulated the preferred position with respect to the proposed coal sampling and analysis rules found in subsections (c), (d), (e) and (f). The Board finds that these proposed subsections provide clarity, specificity, and consistency with Agency practices, which will benefit both the regulated community and the Illinois coal industry.

IERG's suggested language, which intends to maintain the status quo, requires the Agency to use the permitting process as the means to regulate coal sampling and analysis practices. The Agency's proposed regulatory framework appears much more efficient than the individual permitting of 78 facilities in this regard. The predictable and uniform coal sampling and analysis approaches of subsections (c), (d), (e), and (f) also will aid the coal industry in contracts for the sale of coal. The Board would also envision a reduced administrative burden for the Agency and possibly less litigation if the Agency's proposal, rather than IERG's proposal, is adopted.

The Board notes that an argument of IERG that coal sampling and averaging rules should not be part of the Illinois SIP warrants comment. The Board's function in this matter is to address the Agency's request to promulgate regulations, as directed by the Environmental Protection Act ("Act"). The Act does not put submittal of regulations for SIP approval within the Board's domain.

Fourth, the Board has made certain changes in the Agency's proposed subsection (c). The Board chose to rephrase the "two-month average" with the phrase "consecutive two-month average" to clarify and specify the meaning of the average. The Board has also added the lb/MBtu emission rate along with the hourly emission rate since both may be determined using subsection (c). Also, the 95%/20% language, as proposed by the Agency, appears to require further clarification to accomplish the intended purpose of limiting the range of daily emissions. Thus, the participants will find that the Board has proposed different language for First Notice than that in the Agency proposal. The Board would also welcome comments on these changes in subsection (c).

Fifth, the Board finds that the proposed amendment and related record leave open certain issues which must be addressed. The Board requests that the following items be addressed in First Notice comments:

1. The Board has made reference to the 1989 version of 40 CFR in this proposed regulation. Does the 1989 version accurately reference the applicable federal regulations?
2. What is the most up-to-date version of each of the ASTM procedures to be incorporated by reference in Section 214.104?

3. The record fails to disclose the criteria under which the Agency would require stack testing. The Board is considering the addition of language in the first full sentence of Section 214.101(a) that would specifically state whether stack tests should be required: (1) at each permit renewal, or (2) annually, or (3) only where the analyses under (c), (d), (e), or (f) reveal that a facility is either exceeding allowable emission levels or nearly exceeding those levels. Would any of these criteria satisfy the need for specificity and certainty in application of the stack testing procedures?
4. With regard to subsection (c), the Board asks for comments regarding the inclusion of the term "any consecutive 60-day average" instead of "any consecutive two-month average." It was indicated by Pat Dennis of the Agency that the use of a rolling average would provide better data for continued compliance (Tr. Oct. 27, 1987, p. 64). Would the Agency provide comments regarding the use of a rolling average for purposes of compliance?
5. The Board notes that reference to Section 214.121 has been deleted from Section 214.101(c). Section 214.121 carries a Board notation that this Section was invalidated in various cases. The Board requests that the Agency explain what it means by "standby status" in the paragraph discussing the deletion of Section 214.121 on page 7 in its Statement of Reasons of August 24, 1987. The Board also requests the Agency to comment on whether or not there are any facilities previously affected by Section 214.121 which are not now regulated pursuant to NSPS.
6. The Board requests that the Agency comment on the effect of revising the coal sampling and analysis measurement rules found in proposed Section 214.101(c), (d), (e), and (f) with compliance or non-compliance required to be demonstrated pursuant to Section

214.142(a), rather than 214.142, as presently referred to in existing Section 214.101(c).

ORDER

The Board hereby proposes for First Notice the following amendments to 35 Ill. Adm. Code 214 and directs the Clerk to file these with the Secretary of State.

Section 214.101 Measurement Methods

A determination of non-compliance based on any subsection of this Section shall not be refuted by evidence of compliance with any other subsection.

- a) Sulfur Dioxide Measurement. Measurement of sulfur dioxide emissions from stationary sources shall be made according to the procedure published an applicable method specified in 40 CFR 60, Appendix A, Method 6, 6A, 6B, or 6C (1982), incorporated by reference in Section 214.104(a), or by measurement procedures specified by the Illinois Environmental Protection Agency Agency according to the provisions of 35 Ill. Adm. Code 201 pursuant to 40 CFR 60.8(b), incorporated by reference in Section 214.104(b).
- b) Sulfuric Acid Mist and Sulfur Trioxide Measurement. Measurement of sulfuric acid mist and sulfur trioxide shall be according to the barium-thorin titration method as published specified in 40 CFR 60, Appendix A, Method 8 (1982), incorporated by reference in Section 214.104(a).
- c) Solid Fuel Averaging Measurement Daily Analysis Method. This subsection applies to sources at plants with total solid fuel-fired heat input capacity exceeding 439.5 MW (1500 million Btu/hr). If ~~low sulfur solid~~ daily fuel analysis is used to ~~comply~~ demonstrate compliance or non-compliance with Sections ~~214.121,~~ 214.122, 214.141, 214.142(a), 214.162, 214.186 and 214.421, the applicable ~~solid fuel~~ sulfur dioxide standard hourly emission rate or emission rate expressed as kg/MW-hr (pounds per million Btu) shall be met by considered to be the result of a any consecutive two month average of daily samples with provided no more than 95 percent of the samples being values are no greater than 20 percent above the sample average. If samples from a source cannot meet this statistical criterion, each individual daily sample analysis for such source shall be compared to the standard to

determine compliance. The specific ASTM procedures, incorporated by reference, in Section 214.104(c) shall be used for solid fuel sampling, sulfur, and heating value determinations.

- d) Weekly Analysis Method. This subsection applies to sources at plants with total solid fuel-fired heat input capacity exceeding 146.5 MW (500 million Btu/hr) but not exceeding 439.5 MW (1500 million Btu/hr). These plants shall demonstrate compliance or non-compliance with Sections 214.122, 214.141, 214.142(a), 214.162, 214.186 and 214.421 by either an analysis of calendar weekly composites of daily fuel samples or by compliance with Subsection (c) above, at the option of the plant. The specific ASTM procedures incorporated by reference in Section 214.104(c) shall be used for sulfur, and heating value determinations.
- e) Monthly Analysis Method. This subsection applies to sources at plants with total fuel-fired heat input capacity exceeding 14.65 MW (50 million Btu/hr) but not exceeding 146.5 MW (500 million Btu/hr). These plants shall demonstrate compliance or non-compliance with Sections 214.122, 214.141, 214.142(a), 214.162, 214.186 and 214.421 by either an analysis of calendar monthly composites of daily fuel samples or by compliance with Subsection (c) above, at the option of the plant. A.S.T.M. procedures shall be used for sulfur and heating value determinations.
- f) Small Source Alternative Method. This subsection applies to sources at plants with total solid fuel-fired heat input capacity not exceeding 14.65 MW (50 million Btu/hr). Compliance or non-compliance with Sections 214.122, 214.141, 214.142(a), 214.162, 214.186 and 214.421 shall be demonstrated by a calendar month average sulfur dioxide emission rate.
- g) Exemptions. Subsections (c) through (f) shall not apply to sources controlling sulfur dioxide emissions by flue gas desulfurization equipment or by sorbent injection.
- h) Hydrogen Sulfide Measurement. For purposes of determining compliance with Section 214.382(c), the concentration of hydrogen sulfide in petroleum refinery fuel gas shall be measured using the Tutwiler Procedure specified in 40 CFR 60.648 (1986), incorporated by reference in Section 214.104(d)

Section 214.104 Incorporations by Reference

The following materials are incorporated by reference. These amendments do not include any later amendments or editions.

- a) 40 CFR 60, Appendix A ~~(1982)~~ (1989):
- 1) Method 6: ~~method for measurement~~ Determination of Sulfur Dioxide Emissions From Stationary Sources;
 - 2) Method 6A: Determination of Sulfur Dioxide, Moisture, and Carbon Dioxide Emissions From Fossil Fuel Combustion Sources;
 - 3) Method 6B: Determination of Sulfur Dioxide and Carbon Dioxide Daily Average Emissions From Fossil Fuel Combustion Sources;
 - 4) Method 6C: Determination of Sulfur Dioxide Emissions From Stationary Sources (Instrumental Analyzer Procedure); and
 - ~~2)5)~~ Method 8: barium-therin titration method. Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions From Stationary Sources.
- b) 40 CFR 60.8(b) (1989), Performance tests.
- bc) American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103:
- 1) For solid fuel sampling:
ASTM D-2234 ~~(1976)~~ (1986)
ASTM D-2622 (1976)
ASTM D-2013 (1986)
 - 2) For sulfur determinations:
ASTM D-3177 ~~(1976)~~ (1984)
ASTM D-2013 ~~(1982)~~
ASTM D-3180 (1984)
ASTM D-4239 (1985)
 - 3) For heating value determinations:

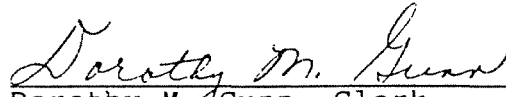
ASTM D-2015 (~~1976~~) (1985)

ASTM D-3286 (~~1976~~) (1985)

ed) Tutwiler Procedure for hydrogen sulfide, 40 CFR 60.648
(~~1986~~) (1989).

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above First Notice Opinion and Order was adopted on the 21st day of June, 1990, by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board