ILLINOIS POLLUTION CONTROL BOARD
December 13, 1979

IN THE MATTER OF:	)	
	)	R78-6
PROCEDURAL RULES REVISIONS (PART VI: HEARINGS PURSUANT TO SPECIFIC RULES)	)	

ORDER OF THE BOARD (by Mr. Goodman):

Part VI of the Board's Procedural Rules shall read as follows: Rules 601-609 are identical to old Part VI; Rules 611-619 are identical to old Part VI(A); Rules 621-629 are new and are designed to specify the manner in which proceedings under Rule 204(e)(3) of Chapter 2: Air Pollution, relating to sulfur dioxide emission limitations, are to be held.

621-629 RULE 204(e)(3) OF THE AIR POLLUTION CONTROL REGULATIONS

621 Petition

(a) A hearing pursuant to Rule 204(e)(3) of the Air Pollution Control Regulations, Chapter 2 of the Board's Rules and Regulations, shall be commenced by filing a petition for a Rule 204(e)(3) hearing with the Agency and by filing ten copies with the Clerk of the Board.

(b) At the time of filing of its petition, petitioner shall submit to the Agency and to the Board any reports or other evidence in accord with Rule 622 of this Part.

(c) Petitioner shall ensure that the procedural requirements of 40 C.F.R. §51.4 (1977) are met. At least 30 days prior to the date of the hearing Petitioner shall:

1. Give notice to the public by prominent advertisement in the Air Quality Control Region affected announcing the date, time and place of such hearing;

2. Make available a copy of the petition for public inspection in at least one location in the Air Quality Control Region in which the source is located;

3. Notify the Administrator of the U.S. Environmental Protection Agency (through the appropriate Regional Office);

4. Notify each local air pollution control agency located within the aforementioned Air Quality Control Region;

5. Notify, in the case of an interstate Air Quality Control Region, any air pollution control agencies of other states included, in whole or in part, in the Region.

622 Requirements for Petition

The petition shall include but not be limited to the following information:

(a) An explicit statement of the site-specific emission limitation (in pounds of sulfur dioxide per million btu actual heat input and total pounds of sulfur dioxide per hour) which is proposed for the facility.

(b) Emission Sources Description

1. The diameter, height, exit gas temperature, and exit gas velocity for all stacks or vents through which sulfur dioxide is emitted into the atmosphere;

2. A description of the fuels used including type, ultimate analysis, sulfur content, and heat content;

3. A description of the type of fuel combustion equipment including method of firing and size (in million btu per hour capacity);

4. A topographic map of terrain within 30 miles of the emission source(s);

5. A specific description of the location of the emission sources, including a plot plan;

6. A specific description of the operating conditions which produce maximum sulfur dioxide emissions.

(c) A summary of any and all ambient air quality data collected by the owner or operator of the source(s) since January 1, 1973. The summary shall include annual averages; maximum and second-highest one-

hour, three-hour, and 24-hour averages for each month; and the number of times the three-hour and 24-hour SO_2 standards were exceeded during each month.

(d) A summary of any and all meteorological data collected by the owner or operator of the source(s) since January 1, 1973, if such data are used in the development of the site-specific emission standard.

(e) A complete description of and justification for all dispersion models and plume rise equations which were used to develop the site-specific emission limitation including all model equations.

(f) A description of and justification for the use of all data which were inputs to the dispersion and plume rise formulae used to establish the site-specific emission standard. The description and justification shall cover, as a minimum, the following input data:

1. Stack diameters, stack heights, exit gas temperatures, and exit gas velocities for all stacks and vents emitting sulfur dioxide at the subject facility as well as for any other sources of sulfur dioxide which were modeled;

2. All SO_2 emission sources which were modeled;

3. All meteorological data.

(g) Calculated maximum ground-level concentrations using the following method, or such other method (or modification of the hereinafter stated method) which the petitioner proves to the satisfaction of the Pollution Control Board to be acceptable.

1. Selection of simulation model:

(i) Gaussian models which allow the input of hourly meteorological data shall be used which are appropriate for the specific location and type of source(s) in question.

(ii) Dispersion models presented in "Guidelines on Air Quality Models" (EPA-450/2-78-027), as amended from time to time, or those deemed by the Board to be equivalent to these models shall be used for detailed air quality studies.

2. Selection of meteorological data and stack parameters:

   (i) The most recent five years of hour-by-hour meteorological data reasonably available, including wind speed, wind direction, atmospheric stability, mixing height and surface temperature shall be used, unless the petitioner demonstrates that one of the five years causes substantially higher concentrations than the other four, in which case detailed analyses conducted for only that "worst case" year would be acceptable. Notwithstanding the previous sentence, one year of on-site data may be used in lieu of the 5-year data requirement.

   (ii) Data shall be from the nearest, representative, quality controlled meteorological collecting site.

   (iii) Stack parameters (including emission rate, stack height, stack diameter, exit velocity, and exit temperature) shall reflect the maximum operating rate for comparison with the 24-hour and 3-hour SO_2 standards.

3. Receptors:

   (i) Receptors shall be located so as to ensure that the source's maximum impact is detected.

   (ii) The determination of the receptor grid shall be fully documented in the modeling study.

4. Special conditions:

   (i) All special conditions which may affect the dispersion of the effluent plume, including local terrain effects and aerodynamic downwash, shall be considered in the modeling study.

   (ii) If terrain is a factor in the vicinity of the source, a model capable of handling variable-height receptors shall be used.

(iii) If the computed height of the effluent plume is less than 2.5 times the height of nearby buildings or local obstructions, aerodynamic downwash shall be studied and considered as a possible factor in the dispersion of that effluent.

5. Determination of violation:

The determination of whether an applicable air quality increment or standard is being violated shall be based on the second highest predicted concentration over the receptor grid for short-term averaging times and on the highest predicted concentration for annual averaging times. However, if only one year of meteorological data is used in the short-term analysis, then the highest predicted concentration may be compared to the applicable standard to determine whether a violation has occured.

6. Other sources:

Effects of other sources of SO_2 shall be taken into account in the modeling study.

(i) An acceptable method is to estimate the "background" from monitoring data which has been subjected to adequate quality control where available. When monitored data is used, the background shall be estimated using monitoring days with meteorological conditions similar to those identified as "worst case" for the source in question.

(ii) If monitoring data is not available, then all sources of SO_2 having a significant impact in the area of the source's impact area shall be used in the simulation model. These sources of SO_2 shall also be modeled at their maximum allowable emission rate for any studies addressing 24-hour or 3-hour averaging times.

(h) Estimates of the frequency, characteristics, probable time of occurrence, and duration of the meteorological conditions associated with the maximum ground-level concentration of sulfur dioxide to which the facility under study contributes.

A description of the techniques used in arriving at the above estimates shall be included.

(i) Background concentrations which were determined for all meteorological conditions required to be examined under Rule 622(g) and for any other meteorological conditions considered in the development of the alternative standard;

(j) A description of the method that was used to determine background sulfur dioxide concentrations in the vicinity of the subject facility for each of the meteorological conditions required to be examined under Rule 622(g) and for any additional meteorological conditions considered in developing the alternative standard.

(k) An evaluation and calibration of the dispersion model if air quality monitoring data were available to perform such evaluation and calibration.

623 Parties

The Agency shall be a party to any hearing held pursuant to this Part.

624 Recommendation

(a) Within 90 days of the filing of the petition the Agency shall make a recommendation to the Board as to the proposed site-specific emission limitation. Such recommendation may include the following:

1. A description of the efforts made by the Agency in conducting its review;

2. The Agency's conclusion as to whether the proposed site-specific emission limitation is adequate to prevent violations of the Primary and Secondary Sulfur Dioxide Ambient Air Quality Standards;

3. The Agency's conclusion as to what disposition should be made of the petition.

(b) The Agency shall serve a copy of its recommendation upon petitioner, and ten copies shall be filed with the Clerk with proof of service.

(c) The petitioner or any other person may file a response to the Agency recommendation within 14 days with proper notice given to the Board and the Agency.

625 Notice and Hearing

(a) The Clerk shall give notice of the petition and hearing in accordance with Part III of these Rules. The proceedings shall be in accordance with the Rules set forth in Part III. The hearing shall be held in the county in which the source is located.

(b) In a hearing, the burden of proof shall be on the petitioner.

626 Transcripts

(a) In any proceeding brought pursuant to this Part VI, the petitioner at its own cost shall furnish to the Board within 15 days following the completion of the hearing seven legible copies of a complete stenographic transcript of the proceedings of the hearing.

(b) Upon petition and good cause shown, the Board may assume such cost.

627-629 Reserved

Mr. Nels Werner dissented.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Order was adopted on the 13th day of December, 1979 by a vote of 3-1.

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