ILLINOIS POLLUTION CONTROL BOARD
January 18, 1979

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

PROPOSED ORDER OF THE BOARD (by Mr. Goodman):

Part VI of the Board's Procedural Rules is proposed to read as follows: Rules 601-607 are identical to old Part VI; Rules 611-614 are identical to old Part VI(A); Rules 621-626, which follow, 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. Public comment will be accepted for a period of 45 days from the date of this Order.

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 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;

(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 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 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;

(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. This requirement is waived if the IEPA Air Quality Short Term Model (AQSTM) is utilized, except that a statement that AQSTM was used must be included.

(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 resulting from adverse meteorological or physical conditions including but not limited to the following (stability classes are those described in Turner, "Workbook of Atmospheric Dispersion Estimates," Public Health Service Publication No. 999-AP-26):

(1) Trapping conditions (plume trapped between the ground surface and a stable layer aloft).

(A) Mixing height equal to the maximum height of plume release for any source at the subject facility.

(B) Wind speed equal to 14.44 feet per second (4.4 meters per second) at a height of 32.8 feet (10 meters) above ground level.

(C) Atmospheric stability equal to Class B (unstable) beneath the stable layer.

(D) Wind direction which aligns the emission sources such as to maximize the ground-level concentrations for the actual source configuration.

(E) Background concentrations which include, as a minimum, the contribution from other sulfur dioxide emission sources which contribute at least 15 micrograms per cubic meter to the point of maximum concentration.

(2) Neutral Stability with moderate to high winds

(A) Mixing height equal to 3937 feet (1200 meters).

(B) Stability class equal to D (neutral).

(C) Wind direction which aligns the emission sources such as to maximize the ground-level concentration for the actual source configuration.

(D) Wind speed which produces the maximum ground-level concentration.

(E) Background concentrations which include, as a minimum, contribution from other SO_2 emission sources which contribute at least 15 micrograms per cubic meter to the point of maximum concentration.

(3) Atmospheric stagnation

(A) Mixing height equal to 1640 feet (500 meters).

(B) Atmospheric stability equal to Class D (neutral).

(C) Wind speed equal to 6.56 feet per second (2 meters per second) at a height of 32.8 feet (10 meters) above ground-level.

(D) Wind direction which aligns the emission sources such as to maximize the ground-level concentration for the actual source configuration.

(E) Background concentrations which include, as a minimum, the conbribution from other sulfur dioxide emission sources which contribute at least 15 micrograms per cubic meter to the point of maximum concentration.

For (1), (2), and (3) above, the maximum 1-hour ground-level concentration shall be calculated using the dispersion model and shall include background. The maximum 24-hour ground-level concentration shall be calculated by either (i) taking 1/4 of the 1-hour maximum calculated above, or (ii) using a method of petitioner's choice for which a justification must be submitted.

(4) Inversion break-up fumigation (for comparison with the 3-hour standard)

(A) Mixing height located at ground level at the beginning of the 3-hour period, rising at a rate of 16 feet per minute (4.88 meters per minute).

(B) Atmospheric stability class of E (stable) above the height of the inversion and B (unstable) below the inversion.

(C) Wind speed of 14.44 feet per second (4.4 meters per second) at a height of 32.8 feet (10 meters) above ground-level.

(D) Wind direction which aligns the emission sources such as to maximize the ground-level concentration for the actual source configuration.

For (4) above, calculate the concentration profile downwind of the facility at 20 minute intervals, calculating the height of the mixing layer at 20 minute intervals using the rate of rise given in item (A) above. Nine 20-minute average concentrations will be calculated to yield the 3-hour maximum ground-level concentration.

If the IEPA AQSTM is used to calculate the ground-level concentration under the fumigation situation, the maximum concentration will be that concentration at a distance $x = 14.44\ t_m$ where x is equal to downwind distance in feet, t_m is equal to the time required for the inversion to rise from the physical stack height to the height of the plume rise.

(5) Any other meteorological conditions experienced in the vicinity of the subject facility or physical characteristics of the facility or its surroundings which might reasonably be expected to produce maximum ground-level sulfur dioxide concentrations.

(6) If appropriate meteorological information specific to the site of the subject facility is available, then such information may be used in place of the conditions described in paragraphs (1) through (4). Such meteorological information must have been collected during a field study having a minimum duration of 3 years.

(h) estimates of the frequency, characteristics, probable time of occurrence, and duration of meteorological conditions associated with the maximum ground-level concentration of sulfur dioxide contributed to by the subject facility. 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. However, the Part III requirements as to the county in which the hearing is to be held shall be inapplicable.

(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

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Proposed Order was adopted on the 18th day of January, 1978 by a vote of 4-0.

Christan L. Moffett, Clerk
Illinois Pollution Control Board