

ILLINOIS POLLUTION CONTROL BOARD
June 11, 1986

IN THE MATTER OF:)
)
PROPOSED AMENDMENTS TO) R85-33
35 Ill. Adm. Code 212.443)
By-Product Coke Plants)

PROPOSED RULE. SECOND NOTICE.

ORDER OF THE BOARD (by J. Theodore Meyer):

This matter comes before the Board upon a December 19, 1985 proposal for regulatory change filed by the Illinois Environmental Protection Agency (Agency), Citizens for a Better Environment (CBE) and various Steel Companies. This proposal represents the proposed settlement arising out of a lawsuit filed by CBE in Federal District Court against the Agency and various Steel companies for failure to revise Illinois' coke-battery and casthouse rules. First Notice was adopted on January 23, 1986 and published at 10 Illinois Register 3731, February 21, 1986. Hearings were held on March 10th and 11th in Chicago and Granite City, Illinois, respectively. The following is a brief history of this proceeding.

In 1979, the Agency submitted to USEPA proposed revisions to Illinois' State Implementation Plan (SIP) which included rules governing coke oven charging and pushing operations. These rules are presently codified at 35 Ill. Adm. Code 212.443(b) and (c). Both of these rules were disapproved for inclusion in Illinois' SIP by USEPA. In connection with this disapproval, CBE sued the Administrator of USEPA in federal court (CBE v. Thomas, No. 80-C-0003). As a result of settlement negotiations arising out of that suit, the Agency, CBE and various Steel companies have proposed coke oven charging and pushing rules for adoption by the Board in lieu of Federal promulgation of these rules.

On May 8, 1986, the Department of Energy and Natural Resources issued a Negative Declaration for this proceeding stating that the net economic impact of the regulation is favorable and the cost of compliance are small or are borne entirely by the proponents of the regulation. The proponents notified the Board that a typographical error appeared in the Board's First Notice Order. That error has been corrected in this Second Notice Order. Having received no other comments, the Board proposes for Second Notice the proposed amendments to 35 Ill. Adm. Code 212.443 as they appeared at First Notice with one minor change.

ORDER

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

PART 212
VISUAL AND PARTICULATE MATTER EMISSIONS

Section 212.443 By-Product Coke Plants

- a) Subpart B shall not apply to by-product coke plants.
- b) Charging: No person shall cause or allow the emission of visible particulate matter from any coke oven charging operation when coal is being charged, except for a total of no more than 170 seconds over 5 consecutive oven charges, or in the case of existing five meter coke batteries having three charging parts, for a total of no more than 200 seconds over 5 consecutive oven charges.

1) Uncaptured Emissions

A) No person shall cause or allow the emission of visible particulate matter from any coke oven charging operation, from the introduction of coal into the first charge port, as indicated by the first mechanical movement of the coal feeding mechanism on the larry car, to the replacement of the final charge port lid for more than a total of 125 seconds over 5 consecutive charges; provided however that 1 charge out of any 20 consecutive charges may be deemed an uncountable charge at the option of the operator.

B) Compliance with the limitation set forth in subparagraph (A) shall be determined in the following manner:

- i) Observation of charging emissions shall be made from any point or points on the topside of a coke oven battery from which an observer can obtain an unobstructed view of the charging operation

- ii) The observer shall time the visible emissions with a stopwatch while observing the charging operation. Only emissions from the charge port and any part of the larry car shall be timed. The observation shall commence as soon as coal is introduced into the first charge port as indicated by the first mechanical movement of the coal feeding mechanism on the larry car and shall terminate when the last charge port lid has been replaced. Simultaneous emissions from more than one emission point shall be timed and recorded as one emission and shall not be added individually to the total time.
- iii) The observer shall determine and record the total number of seconds that charging emissions are visible during the charging of coal to the coke oven.
- iv) For each charge observed, the observer shall record the total number of seconds of visible emissions, the clock time for the initiation and completion of the charging operation and the battery identification and oven number.
- v) The observer shall not record any emissions observed after all charging port lids have been firmly seated following removal of the larry car, such as emissions occurring when a lid has been temporarily removed to permit spilled coal to be swept into the oven.
- vi) In the event that observations from a charge are interrupted the data from the charge shall be invalidated and the observer shall note on his observation sheet the reason for invalidating the data. The observer shall then resume observation of the next consecutive charge or charges and continue until a set of five charges has been recorded. Charges immediately preceding and following

interrupted observations shall be considered consecutive.

Emissions from Control Equipment

- A) Emissions of particulate matter from control equipment used to capture emissions during charging shall not exceed 0.046 gm/dscm (0.020 gr/dscf). Compliance shall be determined in accordance with the procedures set forth in 35 Ill. Code 230, Appendix A (40 CFR 60, Appendix A, Methods 1-5).
- B) The opacity of emissions from control equipment shall not exceed an average of 20%, averaging the total number of readings taken. Opacity readings shall be taken at 15-second intervals from the introduction of coal into the first charge port as indicated by the first mechanical movement of the coal feeding mechanism on the larry car to the replacement of the final charge port lid. Compliance shall be determined in accordance with 35 Ill. Adm. Code 203, Appendix A (40 CFR 60, Appendix A, Method 9), except for the number of readings required.
- C) Opacity readings of emissions from control equipment shall be taken concurrently with observations of fugitive particulate matter. Two observers shall be required.
- c) Pushing: All coke facilities shall be equipped with pushing systems with particulate control equipment which shall be designed to capture at least 90% of all particulate emissions from pushing operations. The particulate control equipment shall be operated and maintained in a manner to achieve the design efficiency. If a stationary hood system is used, the particulate emissions from the outlet of said particulate control equipment shall not exceed 70 mg/dsem (0.03 gr/dsef). If a closely hooded mobile system is used in connection with the operation of an existing coke oven battery with the emissions exhausted directly to the particulate control equipment, the particulate emissions from the outlet of said particulate control equipment shall not exceed 140 mg/dsem (0.06 gr/dsef).

1) Uncaptured Emissions

A) Emissions of fugitive particulate matter from pushing operations shall not exceed an average of 20% opacity for 4 consecutive pushes considering the highest average of six consecutive readings in each push. Opacity readings shall be taken at 15-second intervals, beginning from the time the coke falls into the receiving car or is first visible as it emerges from the coke guide whichever occurs earlier, until the receiving car enters the quench tower or quenching device. For a push of less than 90 seconds duration, the actual number of 15-second readings shall be averaged.

B) Opacity readings shall be taken by a qualified observer located in a position where the oven being pushed, the coke receiving car and the path to the quench tower are visible. The opacity shall be read as the emissions rise and clear the top of the coke battery gas mains. The observer shall record opacity readings of emissions originating at the receiving car and associated equipment and the coke oven, including the standpipe on the coke side of the oven being pushed. Opacity readings shall be taken in accordance with the procedures set forth in 35 Ill. Adm. Code 230 Appendix A (40 CFR 60), Appendix A, Method 9), except that Section 2.5 for data reduction shall not be used.

2) Emissions from Control Equipment

A) The particulate emissions from control equipment used to control emissions during pushing operations shall not exceed 0.040 pounds per ton of coke pushed. Compliance shall be determined in accordance with the procedures set forth in 35 Ill. Adm. Code 230, Appendix A (40 CFR 60, Appendix A, Methods 1-5) and shall be based on an arithmetic average of three runs (stack tests) and the calculations shall be based on the duration of a push as defined in paragraph (1)(A).

B) The opacity of emissions from control equipment used to control emissions during

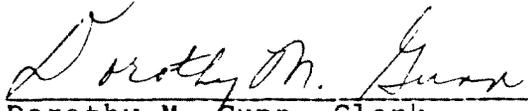
pushing operations shall not exceed 20%. For a push of less than six minutes duration, the actual number of 15-second readings taken shall be averaged. Compliance shall be determined in accordance with 35 Ill. Adm. Code 230, appendix A (40 CFR 60, Appendix A, Method 9), except that Section 2.5 for data reduction shall not be used for pushes of less than six minutes duration.

- d) Coke Oven Doors:
 - 1) No person shall cause or allow visible emissions from more than 10% of all coke oven doors at any time. Compliance shall be determined by a one pass observation of all coke oven doors on any one battery.
 - 2) No person shall cause or allow the operation of a coke oven unless there is on the plant premises at all times an adequate inventory of spare coke oven doors and seals and unless there is a readily available coke oven door repair facility.
- e) Coke Oven Lids: No person shall cause or allow visible emission from more than 5% of all coke oven lids at any time. Compliance shall be determined by a one pass observation of all coke oven lids.
- f) Coke Oven Offtake Piping: No person shall cause or allow visible emissions from more than 10% of all coke oven offtake piping at any time. Compliance shall be determined by a one pass observation of all coke oven offtake piping.
- g) Coke Oven Combustion Stack: No person shall cause or allow the emission of particulate matter from a coke oven combustion stack to exceed 110 mg/dscm (0.05 gr/dscf).
- h) Quenching: All coke oven quench towers shall be equipped with grit arrestors or equipment of comparable effectiveness. The make-up water shall not directly include coke by-product plant effluent. Total dissolved solids concentrations in the make-up water shall not exceed 1500 mg/l. Provided however that the limitations on the quality of quench make-up water shall not apply where the operator employs an equivalent method of control as determined by the Agency.

- i) Work Rules: No person shall cause or allow the operation of a by-product coke plant except in accordance with operating and maintenance work rules approved by the Agency.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Order was adopted on the 14th day of June, 1986, by a vote of 5-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board