

ILLINOIS POLLUTION CONTROL BOARD
May 24, 1973

ENVIRONMENTAL PROTECTION AGENCY)
)
) #72-48
 v.)
)
 GREAT LAKES CARBON CORPORATION)
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)
) #72-431
 v.)
)
 ENVIRONMENTAL PROTECTION AGENCY)

JAMES I. RUBIN, ASSISTANT ATTORNEY GENERAL, APPEARED ON BEHALF OF
ENVIRONMENTAL PROTECTION AGENCY
RONALD BUTLER AND EUGENE W. BEELEER OF WINSTON & STRAWN, APPEARED ON
BEHALF OF GREAT LAKES CARBON CORPORATION

OPINION AND ORDER OF THE BOARD (BY SAMUEL T. LAWTON, JR.):

The above-captioned proceeding is a consolidated enforcement and variance action. #72-48 is an enforcement action in which the Agency contends that Great Lakes Carbon Corporation, in the operation of its Chicago plant, has violated Sections 9(a) and 9(b) of the Environmental Protection Act and Rule 3-3.111 of the Rules and Regulations Governing the Control of Air Pollution. #72-431 is a variance proceeding pursuant to which petitioner seeks variance from the relevant regulations applicable to the operation of its kilns, material handling system, storage piles and permit application requirements.

A stipulation and proposal for settlement was entered into between the parties, which is dispositive of both proceedings and which we approve.

Great Lakes Carbon Corporation (hereinafter referred to as petitioner) is engaged in calcining anthracite coal and petroleum coke at its Chicago plant. The plant facilities consist of the following: four rotary calcining kilns; four rotary cooling drums; covered conveyors for handling raw and calcined coke and coal; enclosed calcined coke storage silos and seven enclosed raw coke silos and open storage piles of raw coal and coke. Particulate matter is emitted from the kiln stacks, cooler stacks and transfer points on material handling conveyors.

The Agency has alleged that emissions from these sources violate Rule 3-3.111 of the Rules and Regulations Governing the Control of Air Pollution and Chapter 2, Part II, Rule 203(b) of the Rules and Regulations of the Board (Air Pollution) which contentions Great Lakes Carbon Corporation disagrees with.

In addition to particulate emissions, sulphur dioxide (SO₂) and nitrogen oxide (NO_x) are emitted from the kiln stacks and cooler stacks. Petitioner estimates that SO₂ emissions do not exceed 330 ppm and that NO_x emissions do not exceed .55 lbs/m btu. During unusual weather conditions, petitioner's storage piles emit fugitive particulate matter. Approximately six complaints were received by the Agency during the summer and fall of 1971 and the summer of 1972, regarding fugitive particulate emissions allegedly emanating from petitioner's storage piles. Complaining witnesses were located downwind from petitioner's premises. The stipulation recites that petitioner contests all factual allegations and legal contentions set forth in the Agency's complaint.

Petitioner has been engaged in the calcining operation since 1942 and has been unaware of any citizens' complaints concerning its operation until the filing of the Agency enforcement action. The stipulation further sets forth the equipment installed by the petitioner to control particulate emissions on its kiln #1 cooler stack, pursuant to its Chicago permits and that it was unaware of the necessity for the obtaining of State permits, pursuant to Section 9(b) of the Act, but that upon the filing of the present enforcement action, it did file for and obtain the permits for the operation of its multiclone and wet scrubber, as set forth in the variance petition and Exhibits "E" and "F" appended thereto.

In settlement of the pending proceedings, petitioner will undertake to backfit one or more of its four calcining kilns and corresponding cooling drums or will discontinue operation of any or all of these kilns and respective cooling drums in order to comply with the State particulate emission standards. The stipulation sets forth the backfitting program to be pursued as follows:

(a) Testing. Petitioner will arrange to conduct source and sample testing at each of the kilns to be backfitted. Petitioner will arrange to source test to obtain samples at two locations - the inlet to the settling chamber, and the breech or outlet from the chamber. The tests will be conducted at each location to determine (i) gas flow rate and temperature, (ii) gas analysis, (iii) particulate flow rate, (iv) particulate analysis and (v) particulate specific gravity. Petitioner will arrange to sample test by obtaining (i) isokinetic samples of particulate, (ii) Anderson Cascade Impactor tests run isokinetically and (iii) ash assays. The testing will be completed in approximately one month.

(b) Preliminary Engineering. Petitioner will conduct a preliminary engineering review program for the purpose of selecting the design of the backfitting technology to be employed at its Chicago facilities. Such program will consist of the following:

- (1) an in-depth engineering review of all backfit technology previously installed at Petitioner's other calcining plants;
- (2) an in-depth engineering analysis of all new research and development abatement technology in terms of adaptability for the Chicago facilities;
- (3) calibration and adjustment of tentative backfit technology by source and sample test results;
- (4) engineering design and scheduling to relocate material handling conveyors in order to minimize interference with production;
- (5) engineering redesign of feed systems for backfitted kilns to accomodate annular feeding and other modifications;
- (6) review feasibility of diverting of cooling drum exhaust through settling chamber versus retention of multiclone and wet scrubber technology.

The preliminary engineering phase will be completed in approximately 2-3 months.

(c) Engineering and Design. At the completion of the preliminary engineering phase, Petitioner will contract a consulting engineer to provide final drawings, plans and specifications for installation of abatement technology. Such work will include:

- (1) layout and design of new settling chamber and stack, including general arrangements, piling, foundations, structural steel, mechanical chutes, stack refractory and supporting steel for the arch and walls of the settling chamber;
- (2) layout and design of a raw coke conveyor and calcined coke conveyor systems;
- (3) investigation of existing soil test reports, existing piling, pile caps and foundations;
- (4) adaptation of existing structural steel shop details from other similar installations, where applicable, and preparation of additional steel shop detail drawings as required.

The engineering and design phase will be completed in approximately 4 months.

(d) Bids and Procurement through Completion of Construction. Immediately upon completion of the various stages of the engineering and design phase, Petitioner will solicit bids, let contracts and proceed on a phased construction schedule to achieve completion in accordance with the schedule attached hereto as Exhibit E and made a part hereof. The details of this particular phase, including cost analysis, will be tested in greater depth in the statement and exhibits submitted by C. R. Binner, Vice President and Chief Engineer for Petitioner.

(e) Schedule. Immediately upon approval by the Board, the above-described backfitting program will commence as follows:

- (1) all four kilns will be available for operation during the first 8 months following approval, such period representing the time necessary to complete testing, preliminary engineering and engineering and design for kiln #1;
- (2) beginning 8 months from approval, kiln #1 will shut down for backfitting, and kilns ##2, 3 and 4 will remain in operation while undergoing testing, preliminary engineering, engineering and design;
- (3) beginning 16 months from approval, backfitted kiln #1 will start up and kilns ##2, 3 and 4 will shut down for backfitting or phase-out.

It is estimated that the cost of this program will be approximately \$1,000,000 for each kiln so backfitted. The backfitting schedule is graphically depicted on Exhibit "H" appended to the variance petition.

Subject to final customer acceptance, [this term refers to the acceptance by customers of petitioner's finished product,] which is anticipated no later than this month (May, 1973) petitioner will backfit all calcined coal and coke material handling conveyors from kiln #1 to be retained after kiln backfitting with a newly-developed system whereby light oil is applied to minimize dust emissions from calcine coal and coke. In the absence of customer approval, petitioner will install a dust collection system consisting of baghouses, ducts and blowers described on page 11 of the variance petition and depicted on Exhibit "G". Either collection system will be completed within one year from this date. Cost of this backfitting is estimated to be approximately \$1,000,000.

In addition, petitioner will purchase a spray truck and control fugitive particulate emissions by spraying inactive piles with latex spray and spray open or working piles with water. All backfitting schedules will be initiated immediately upon the entry of this Order. Petitioner has already purchased the spray truck above-described and has initiated preliminary engineering for backfitting of kiln #1. Kiln #1 backfitting and the shutdown of kilns ##2, 3 and 4 will proceed to completion within 16 months from this date with the understanding that kiln #1 will remain operable for a period of eight months from this date.

So long as petitioner pursues its backfitting program, alternate technology may be employed. Petitioner likewise reserves the right to discontinue the backfitting program upon condition that petitioner will likewise discontinue the operation of all calcining kilns and cooling drums. The parties to the stipulation represent that upon completion of the backfitting program, kiln emissions will be in compliance with current applicable particulate standards. The stipulation contains the further provision:

"(e) In the event of a fuel shortage beyond Petitioner's control, which shortage to Petitioner shall be reported to the Pollution Control Board and to the Agency with supporting affidavits, kilns ##2, 3 and 4 may operate at current emission levels beyond the scheduled 16-month shutdown date, provided that such shortage has prevented Petitioner from operating at 50% production capacity during said 16-month period, and provided, further that Petitioner may operate Kilns ##2, 3 and 4 beyond said scheduled shutdown date only to recover said loss of production capacity attributable to said shortage; nothing in this subsection shall allow operation of Kilns ##2, 3 and 4 at current emission levels beyond the date of May 30, 1975, even if the 50% production capacity schedule during the original 16-month period was not recaptured."

Petitioner agrees to pay a civil penalty in the amount of \$25,000. The Board retains jurisdiction of all matters arising out of this proposal and the proposal will not be subject to alteration or modification without approval of the Board. Petitioner shall apply for and obtain all necessary permits to enable installation and operation of the backfit programs aforesaid, and subject to such conditions that are not inconsistent with the terms of the Stipulation and the recommendation of the Agency. It is agreed that the variance granted to petitioner will be subject to the following provisions set forth in the Agency's amended recommendation, which will be operative with respect to all kilns after December 31, 1973 until shutdown. The amended recommendation provides as follows:

- "1. Variance from Regulation 203 be granted to allow continued operation of Kiln #1 during a scheduled 16 months program, pursuant to the provisions of paragraph 12(a)(2) of the Stipulation and Proposal for Settlement, subject to the following conditions:

- (a) Within 30 days of approval of said Stipulation by the Board, Petitioner shall execute a corporate bond in the amount of \$900,000 subject to the terms and conditions of a performance bond previously agreed upon by the parties and attached to the Stipulation. The bond shall be mailed to: Fiscal Services, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706.
 - (b) That within 30 days of the stipulated agreement, Petitioner shall cause a stack test to be conducted on the Kiln #1 cooler by an independent testing firm. The Agency shall be informed at least five (5) days before the test is performed as to the date and time, and shall be allowed to witness said test.
 - (c) That Petitioner shall obtain all necessary Agency permits required under the present Statute and Regulations of the Pollution Control Board and State of Illinois prior to construction of control equipment for kiln #1.
2. That the variance from Regulation 203 be granted for the operation of Kilns #2,3 and 4 during the scheduled 16-month program described in the Stipulation and Proposal for Settlement.
 3. That the variance be granted for the proposed emission controls for the material handling system subject to the following conditions:
 - (a) Within 30 days of approval by the Board of the aforementioned Stipulation, Petitioner shall execute a corporate bond in the amount of \$100,000, subject to the terms and conditions of a performance bond previously agreed upon by the parties and attached to the Stipulation. The bond shall be mailed to: Fiscal Services, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706.
 - (b) That Petitioner obtain all necessary Agency permits required under the present Statute and Regulations of the Pollution Control Board and State of Illinois prior to construction of said emission control system.
 4. That the variance is granted for the latex and water spraying system to control emissions from storage piles.
 5. Such variance, as described in 1 through 4 above, shall cover a period of one year, commencing from the Board Order date. Any request for variance extensions shall be filed with the Agency at least 90 days prior to the variance expiration date.

6. Progress reports on all aspects of the compliance program, as applicable, shall be submitted to the Agency at two-month intervals, beginning 30 days after the stipulated agreement between Petitioner and the Agency, and continuing until the compliance program is completed."

The stipulation and settlement are approved.

This opinion constitutes the findings of fact and conclusions law of the Board.

IT IS THE ORDER of the Pollution Control Board that:

1. Stipulation and proposal for settlement entered into between the parties are hereby approved and incorporated herein. Said approval is subject to the conditions of the amended recommendation filed by the Environmental Protection Agency, as set forth above in this Opinion.
2. Variance from Regulation 203 is granted to petitioner until May 24, 1974 to allow continued operation of Kiln #1 during a scheduled 16 months program, pursuant to the provisions of paragraph 12(a)(2) of the Stipulation and Proposal for Settlement, subject to the following conditions:
 - (a) Within 30 days from the date hereof, Petitioner shall execute a corporate bond in the amount of \$900,000, subject to the terms and conditions of a performance bond previously agreed upon by the parties and attached to the Stipulation. The bond shall be mailed to: Fiscal Services Division, Illinois Environmental Protection Agency, 2200 Churchill Drive, Springfield, Illinois 62706.
 - (b) Within 30 days from the date hereof, Petitioner shall cause a stack test to be conducted on the Kiln #1 cooler by an independent testing firm. The Agency shall be informed at least five (5) days before the test is performed as to the date and time, and shall be allowed to witness said test.
 - (c) That Petitioner shall obtain all necessary Agency permits required under the present Statute and Regulations of the Pollution Control Board and State of Illinois prior to construction of control equipment for Kiln #1.
 - (d) This variance may be extended subsequent to May 24, 1973, upon a demonstration by petitioner of satisfactory progress. Petition for said extension of variance shall be filed with the Board no less than 90 days prior to May 24, 1974.

3. The variance from Regulation 203 is granted to May 24, 1974 for the operation of Kilns #2, 3 and 4 during the scheduled 16-month program described in the Stipulation and Proposal for Settlement. This variance may be extended subsequent to May 24, 1973 upon a demonstration by petitioner of satisfactory progress. Petition for said extension of variance shall be filed with the Board no less than 90 days prior to May 24, 1974.
4. Variance is granted for the proposed emission controls for the material handling system subject to the following conditions:
 - (a) Within 30 days from the date hereof, Petitioner shall execute a corporate bond in the amount of \$100,000, subject to the terms and conditions of a performance bond previously agreed upon by the parties and attached to the Stipulation. The bond shall be mailed to: Fiscal Services Division, Illinois Environmental Protection Agency, 2200 Churchill Drive, Springfield, Illinois 62706.
 - (b) That Petitioner obtain all necessary Agency permits required under the present statute and Regulations of the Pollution Control Board and State of Illinois prior to construction of said emission control system.
5. Variance is granted for the latex and water spraying system to control emissions from storage piles.
6. All variances described shall be for a period of one year, commencing from this date. Any request for variance extensions shall be filed with the Board and the Agency at least 90 days prior to the variance expiration date.
7. Progress reports on all aspects of the compliance program, as applicable, shall be submitted to the Agency at two-month intervals, beginning 30 days after the stipulated agreement between Petitioner and the Agency and continuing until the compliance program is completed.
8. Civil penalty in the amount of \$25,000 is assessed against Great Lakes Carbon Corporation, pursuant to the provisions of paragraph 12(f) of the stipulation and proposal for settlement. Payment shall be made by cash or certified check payable to the State of Illinois and sent to: Fiscal Services Division, Environmental Protection Agency, 2200 Churchill Drive, Springfield, Illinois 62706.

9. Approval by the Board of the Stipulation and Proposal for Settlement constitutes total disposition of all matters raised by the enforcement action filed by the Agency herein.

I, Christan Moffett, Clerk of the Pollution Control Board, certify that the above Opinion and Order was adopted on the 24th day of May, 1973, by a vote of 4 to 0.

Christan Moffett