

ILLINOIS POLLUTION CONTROL BOARD
June 22, 1978

UNION CARBIDE CORPORATION,)
)
) Petitioner,)
)
)
) v.) PCB 78-21
)
)
) ENVIRONMENTAL PROTECTION)
) AGENCY,)
)
) Respondent.)

OPINION AND ORDER OF THE BOARD (by Mr. Goodman):

On January 31, 1978 Union Carbide Corporation (Carbide) filed a Petition for Review of Permit Denial alleging that the Illinois Environmental Protection Agency (Agency) wrongfully denied its operating permit application for certain operations at its Robinson, Illinois facility. A hearing was held in this matter on April 13, 1978. There were no citizen testimony at the hearing, and the Board has received no public comment on this matter. A Stipulation of Fact has been filed before the Board. Carbide produces calcined petroleum coke which is used in the manufacture of carbon and graphite electrodes for furnaces and lighting devices, brushes for electric motors and generators, etc. The calcined coke is produced by heating raw petroleum coke under controlled conditions, driving off volatile hydrocarbons and water along with some entrained coke particles. After heating to approximately 1400°C, the resultant incandescent coke is quenched by spraying water directly onto the coke, which not only cools the coke but prevents the formation of surface oxydation. Quenching results in a stream of vaporized water and entrained calcined coke particles.

Carbide designed and installed thermal combustion and settling chambers at a cost of \$2.7 million in order to comply with the limitations of Rule 203(a) for particulate emissions. This compliance program was undertaken pursuant to a previous variance granted by the Board in PCB 73-313 and PCB 75-29. In

March, 1976, the Agency granted Carbide a permit to operate its calcining kiln until March 1, 1978. On January 4, 1978, the Agency denied Petitioner's application to renew its operating permit alleging that under Rule 201 the weight of quench water cannot be considered part of the total process weight.

If the 16,300 lbs./hr. of quench water is added to the 40,380 lbs./hr. of raw coke, a process weight rate for each kiln is determined to be 28.34 tons per hour, allowing under Rule 203(a) an emission of 15.15 lbs./hr. Tests on the exhaust stacks at Robinson indicated average emissions of 14.67 lbs./hr., well within the limits allowed under Rule 203(a) if the quench water is considered part of the process weight. Without the quench water in the process weight rate, the calculated allowable emission rate is 12.91 lbs./hr. in which case Carbide is in violation of the regulations.

The issue to be determined by the Board is simply whether the weight of the quench water utilized by Carbide in its coke calcining process is to be included in determining the process weight rate. If the Board determines that issue in favor of the Agency's position, Carbide raises the subsequent issue of estoppel due to the Agency's prior acceptance of Carbide's permit application and its subsequent denial when no change in the process has occurred.

There appears to be no question but that the weight of the raw coke must be included in the process weight for the calcining process. As its authority for excluding the quench water from the process weight rate, the Agency cites Collier Carbon and Chemical Corporation v. Environmental Protection Agency, PCB 77-48 (September 19, 1977), where the Board stated in an unfortunate piece of dictum that the weight of quench water should not be included. In addition, the Agency cites Collier Carbon and Chemical Corporation v. Environmental Protection Agency, PCB 77-285 (January 20, 1978), alleging this case to be a reaffirmation of PCB 77-48 (Collier I). With respect to PCB 77-285 (Collier II), the Board finds that the issue there was not one of process weight rate, but rather a request by Collier that it be permitted to deduct from its particulate emissions that portion of the particulate that is attributable to the quench water. The Board denied this request because so little particulate thus generated found its way to the atmosphere, the effect was de minimis. Nowhere in Collier II does the Board affirm the dictum of Collier I. With respect to Collier I, the Board has held in a previous

case, United States Steel Corporation v. EPA, PCB 77-317 (June 22, 1978) that "the Board finds that it no longer agrees with that holding in Collier Carbon, PCB 77-48." In PCB 77-317 adopted earlier today, the Board found "in addition, since USS will be held liable for that part of the cooling medium which in turn becomes part of the emissions due to the process, and since this part of the cooling medium bears a direct relationship to the amount of emissions, USS must be given credit for the weight of material thus lost." In that case the cooling medium was oil, but the Board finds that the principle applies here also. Thus in this case, the weight of the cooling medium, the water, that is flashed off due to the quenching process should be included in the process weight rate for the purpose of determining the allowable emissions.

Since Carbide's emissions are in compliance with the regulations if the quench water is considered as part of the process weight and since we have found that the quench water flashed off in this case is part of the process weight, the Agency was incorrect in denying Carbide's permit application for its petroleum coke calcining operation in Robinson, Illinois, for the reasons stated in its denial.

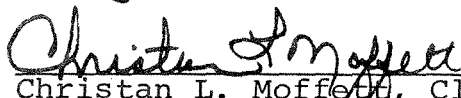
This Opinion constitutes the findings of fact and conclusion of law of the Board in this matter.

ORDER

It is the Order of the Pollution Control Board that the Agency's denial of Union Carbide Corporation's permit application designated DO 5110042 for its petroleum coke calcining operation at Robinson, Illinois, be reversed and that the matter be remanded to the Agency for further consideration consistent with this Opinion and Order.

Mr. Werner concurs.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 22ND day of June, 1978 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board