

ILLINOIS POLLUTION CONTROL BOARD  
July 22, 1976

R. A. CULLINAN & SON, INC.,            )  
  )  
  )            Petitioner,            )  
  )  
  )            v.                        )            PCB 76-108  
  )  
  )  
ENVIRONMENTAL PROTECTION AGENCY,    )  
  )  
  )            Respondent.            )

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

On April 21, 1976, R. A. Cullinan & Son, Inc., (Cullinan) filed a Petition for Variance before the Pollution Control Board (Board) for its Lawndale Asphalt Plant in the Twomey Gravel Pit in Oran Township, Logan County, Illinois. The Environmental Protection Agency (Agency) filed its Recommendation on June 23, 1976. No hearing has been held in this matter. Cullinan has filed a waiver of the 90-day rule until July 26, 1976.

Cullinan is a corporation engaged in the business of road and bridge construction. The subject asphalt plant, which was installed in 1971 and moved to its present site in 1973, produces asphalt paving mixes by combining aggregates and asphalt in proper proportions. The plant has a rated capacity of 275 tons per hour and a normal production rate of 250 T/hr. The main products are bituminous aggregate mixture (BAM), I-II bituminous concrete, and B-5 bituminous mixture. Normal production is maintained approximately six hours per day, 100 days per year and produces 150,000 tons of asphaltic concrete products annually.

Cullinan has twice been denied an operating permit by the Agency. In Cullinan's Petition, it seeks variance from the operating permit requirement of Rule 103(b) of the Air Pollution Regulations (Chapter 2) as well as from the opacity requirement of Rule 202(b) and the particulate emission limitation of Rule 203(a) or 203(b) of Chapter 2.

The greatest source of particulate emissions from the asphalt plant is the rotary dryer. Secondary sources include the hot aggregate bucket elevator, the gradation unit, and the pugmill. Cullinan's plant is equipped with a primary dust collection system consisting of a multiclone device and a secondary collection system consisting of a wet scrubber which has been modified through the addition of extra spray nozzles and the continual use of fresh water as opposed to recirculated water. In addition, this plant is equipped with a scavenger dust collection system which vents the gradation unit, the pugmill, and the hot elevator into the main exhaust system to the multiclone and wet scrubber. With this arrangement, the emission sources are ultimately vented to the atmosphere through the wet scrubber exhaust stack.

According to Cullinan's Petition, a particulate emission test using a UOP sampling train was performed for in-house information on the wet scrubber exhaust stack on October 22, 1975, and the test results indicated an average emission rate of 58 pounds per hour when BAM was being produced at a process weight rate of some 275 tons per hour. The Agency, however, in its Recommendation indicates that this stack test was not conducted according to methods acceptable to the Agency. According to the Agency, emissions from Cullinan's plant calculate to 262 pounds per hour at a process weight of 250 tons per day based upon the plant vendor's standard method of calculation.

Because the subject plant was not in compliance with Rule 203(a) on the effective date of Chapter 2, Rule 203(b) is applicable. At a process weight rate of 250 tons per hour, Rule 203(a) allows a particulate emission rate of 48.5 lb. of particulates/hour. Thus, according to both Cullinan's and the Agency's data, the subject plant is currently in violation of Rule 203(a).

Cullinan proposes to convert the existing spray bar scrubber to an orifice scrubber at a cost of approximately \$10,000.00. The increased efficiency of the latter is due to the increased mixing of the dust particles and the water spray. The orifice type scrubber is expected to operate at a pressure drop of 15 inches of water and have an efficiency of 99%. According to the Agency Recommendation, with the proposed controls the actual plant emissions should be reduced to approximately 12 lb./hr. The equipment is scheduled for delivery on September 30, 1976, and installation by November 30, 1976, with the first operational debugging to be completed 15 days after the reopening of the plant for the 1977 season (approximately April 30, 1977).

Both Cullinan and the Agency presented evidence on the effect of Cullinan's plant on the ambient air quality in the area. The plant is located in a rural area of Logan County. There are no similar emission sources within 5 miles of Petitioner. Logan County is included in the Illinois EPA 1975 West Central Illinois Intrastate Air Quality Control Region 75 which, together with Region 66, contains 5 particulate monitoring stations ranging 25-37 miles in distance from the subject plant. In 1975, the State and Federal annual ambient particulate primary standard was violated at one of the 5 stations, which was located in Decatur, 32 miles southeast of Cullinan's plant. The Agency Recommendation indicates that, although the evidence of Cullinan's affect on ambient air quality is inconclusive, the Agency believes that the possibility that Cullinan will cause a violation of the ambient air quality in the area during the period of the proposed variance is minimal.

Cullinan alleges that denying it the requested variance and subjecting it to possible enforcement action would impose an arbitrary and unreasonable hardship upon it. Cullinan held an operating permit for its plant until it was found that an inadvertent error had been made in describing the wet scrubber in the application and a new application was requested. Cullinan has at all times cooperated with the Agency and will achieve full compliance with the Regulations through the program outlined in its Variance Petition.

Cullinan seeks variance from the permit requirement of Rule 103(b) as well as from Rules 202(b) and 203(a). The Board finds that denial of variance from Rules 202(b) and 203(a) would impose an arbitrary and unreasonable hardship upon Cullinan and that the program outlined in Cullinan's Petition is sufficient to achieve compliance with these rules within a reasonable amount of time. Therefore, the Board grants Cullinan variance from Rules 202(b) and 203(a). However, as to variance from Rule 103(b), Rule 103(b)(6)(A) specifically provides for the granting of operating permits to applicants who have received variances and are in compliance with the terms of such variances. Therefore, the Board finds variance from Rule 103(b) to be inappropriate here and denies such request.

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

#### ORDER

It is the Order of the Pollution Control Board that:

1. Petitioner R. A. Cullinan is hereby granted variance

from Rules 202(b) and 203(a) of Chapter 2 for its Lawndale Asphalt Plant until April 30, 1977, subject to the following conditions:

a. By no later than ninety (90) days after the date of the Board Order in this case Petitioner shall obtain a construction permit for the purpose of constructing the orifice scrubber control equipment described in the Petition for Variance.

b. Petitioner shall submit written reports describing the progress of construction of the orifice scrubber to the following persons:

Control Program Coordinator  
Division of Air Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

Regional Supervisor  
Division of Air Pollution Control  
4500 South Sixth Street Road  
Springfield, Illinois 62706

Such written reports shall be submitted on the following dates:

July 30, 1976  
September 30, 1976  
November 30, 1976  
March 30, 1977  
April 15, 1977  
April 30, 1977

c. By April 30, 1977, Petitioner shall have completed installation of the scrubber and shall have made totally operational the control system which is the subject of this Petition.

d. By April 30, 1977, Petitioner shall obtain an operating permit for the plant's operation.

e. Within fourteen (14) days after the date of the Board Order, Petitioner shall execute and forward to the Control Program Coordinator a Certification of Acceptance and

agreement to be bound by all terms and conditions of the variance. The form of said Certification shall be as follows:

CERTIFICATION

I (We), \_\_\_\_\_ having read and fully understanding the Order of the Illinois Pollution Control Board in PCB 76-108, hereby accept said Order and agree to be bound by all terms and conditions thereof.

SIGNED \_\_\_\_\_

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

2. R. A. Cullinan's request for variance from Rule 103(b) is hereby denied.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 22<sup>ND</sup> day of July, 1976 by a vote of 5-0.

  
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Christan L. Moffett, Clerk  
Illinois Pollution Control Board