

ILLINOIS POLLUTION CONTROL BOARD  
January 20, 1972

THE MINERVA OIL COMPANY )  
 )  
 v. ) PCB 71-265  
 )  
 ENVIRONMENTAL PROTECTION AGENCY )

Joseph R. Hale, Attorney for The Minerva Company  
Frederick C. Hopper and Wayne Golomb, Attorneys  
for the Environmental Protection Agency

Opinion and Order of the Board (by Samuel R. Aldrich):

A petition for variance was filed by The Minerva Company ("Minerva") on September 2, 1971. Petitioner requests a variance to exceed the allowable emission rate of Rule 3-3.111 of the Rules and Regulations Governing The Control of Air Pollution ("Air Rules"), on its No. 1 plant in Hardin County, Illinois.

Petitioner's principal business is the mining and milling of fluorspar (calcium fluoride) ores to produce a concentrate that is consumed, or further processed, in several basic industries. In addition, the mineral sphalerite (zinc sulfide) is recovered as a co-product in the milling process and sold to zinc smelters for further processing.

At the present time, Minerva is operating four underground mines, a pre-concentrating plant and a concentrating plant (mill) at Mine 1. Approximately 1000 tons of ore are processed daily. The plant employs from 180 to 200 people from the counties of Hardin and Pope.

About 60% of Minerva's total fluorspar production is shipped as dry material. The drying process is accomplished in two rotary dryers (kilns). Kiln 1 is a counterflow dryer and is equipped with a cyclone collector, followed by a Type W Rotoclone collector. This kiln is claimed to emit practically no dust (R. 28, 60). Kiln 2 is a parallel-flow kiln and is followed by three collectors: (1) a large diameter cyclone, (2) an Amerclone and (3) a Type W Rotoclone. George Musson, an engineer for Minerva, estimated that without the use of dust collectors, at least 15 percent of the dry product would be lost (R. 46).

It is Kiln 2 for which Minerva seeks a variance. Petitioner estimates dust emissions from Kiln 2 to be 15.0 lbs/hr or 1.4 lbs/hr above the allowable limit specified in Rule 3-3.111 of the Air Rules for the process weight rate characteristic of Minerva.

The record indicates that the final collector on Kiln 2, a Type W Rotoclone, was ordered in March of 1971 (R. 47). On May 4, 1971, Minerva applied to the Agency for a permit to install the new equipment. According to George Musson, the delay in applying for a

permit was because Minerva had assumed that no permit was necessary in view of the fact that the same type of collector was already operating effectively on Kiln 1 (R. 49). The Company was informed of the necessity for a permit by Paul Schmierbach, an engineer for the Agency. A denial of the permit was received on June 14. Minerva subsequently restated its case to the Agency but again, notice was received July 23 that a permit had been denied. At that time the Agency recommended that Minerva apply for a variance (Pet. Ex. 7).

The new collector was delivered in June of 1971 (R. 48). Despite the Agency's refusal to issue an installation permit, Minerva proceeded to install the collector and began operating the device in September, 1971 (R. 48). In defense of this action, George Musson stated that the alternative would have been to allow dust emissions to continue pending a decision on the variance request. The collector was operated in order to reduce emissions and to prevent losses of product worth perhaps \$100 per day (R. 52).

In making its case for a variance, Minerva contends that the environmental impact of 1.4 lbs of dust per hour would be of no significance. The Company notes that fluorspar is an inert mineral with no chemical effect on the environment and its ingestion in moderate amounts is not considered harmful to human health. Moreover, Mine 1 is located in a very remote area. The nearest residence is about 1/4 mile from the plant and the nearest town is about 5 miles distance. The Company has never received any complaints about dust emissions from the Mine 1 Mill in its 27 years of operation. The amount by which the estimated emissions from Kiln 2 exceed the standard is less than 10 percent. Indeed, George Musson expressed doubt that emissions could be estimated to an accuracy of 10 percent (R. 53). Thus the Company is in fact uncertain as to whether its emissions actually exceed the standard. Conversely, denial of a variance would impose considerable economic hardship on Minerva and would result in loss of work for many of its employees.

We are convinced from the facts in this case that a variance is clearly merited. However, in granting a variance we will impose a number of conditions. The record indicates that emissions from Kiln 2 could be further reduced by installing a wet spray chamber ahead of the Type W Rotoclone (R. 63). The device is of modest cost and could be installed within a few weeks. Minerva is agreeable to installing it (R. 91). Although the effectiveness of such a chamber cannot be predicted with precision, we feel that installation of the device is warranted. We will therefore require Minerva to install and operate a wet spray chamber. We leave to Minerva any decisions regarding the most appropriate construction materials and other technical details. It will of course be necessary for the Company to apply for an installation permit from the Agency. We will also require that once the chamber is in operation, Minerva submit a report indicating the estimated rate of dust emission from Kiln 2. As a final condition on the granting of a variance, we will order Minerva not to increase the process weight rate of Kiln 2 without prior notice to the Agency.

Minerva is hereby granted a variance until April 15, 1972, in order to install and test the wet spray chamber. If tests indicate that emissions from Kiln 2 still exceed the standard we will require Minerva to submit new plans for achieving compliance. Such plans will form the basis for consideration of an extension of the variance granted here.

ORDER

1. The Minerva Company is hereby granted a variance from Rule 3-3.111 of the Rules and Regulations Governing the Control of Air Pollution until April 15, 1972, for Kiln 2 of its No. 1 plant in Hardin County, Illinois.
2. By March 31, 1972, The Minerva Company shall install and place in operation a wet spray chamber on Kiln 2 of its No. 1 plant.
3. By April 15, 1972, The Minerva Company shall submit to the Pollution Control Board and to the Environmental Protection Agency a report indicating the estimated rate of dust emission from Kiln 2. On the basis of the report, the Board will decide whether any further action is needed.
4. The Minerva Company shall not increase the process weight rate of Kiln 2 above the present rate without prior notification of the Environmental Protection Agency.

I, Christan Moffett, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order this 20 day of January 1972, by a vote of 4-0.

Christan Moffett

