

to change its characteristics by the application of heat and pressure (R.17-8).

The steam demand of the coal-fired boilers to heat the building is a uniform one which does not upset the boilers, but every hour one of five planishing presses is run for an hour, which requires an almost double steam demand for the three to five minutes during which the press is started (R.19). This fluctuating steam demand is a source problem (R.20) and is the reason attributed to violations of Rule 203(g)(1)(B) (R.23-4, 73-5, 89-90, 96-7, 113-4).

On September 5, 1979 hearing was held in this matter. A petition to intervene by thirty-three owners of mobile homes in King's Trailer Court, which is located just northwest of the city limits of Ottawa in LaSalle County, was allowed by the hearing officer (R.10-11). Representative Breslin of the 38th District on May 14, 1979 submitted petitions from 97 citizens opposed to granting of a variance. These were filed more than 21 days after the effective filing date of the petition of April 13, 1979 and are therefore considered as public comment.

In December of 1977, Petitioner bought the facility at issue (R.20). A permit had been issued covering the facilities for the period 1974 through February of 1979; the permit was based on testing conducted in 1973 for Union Carbide Corporation (Union). Petitioner believed the results of the 1973 tests to be valid and applied for a permit in June of 1978. In July of 1978, the Illinois Environmental Protection Agency (Agency) requested more testing done. This was performed in October but the results indicated to Petitioner that a permit might not be granted to Petitioner upon the expiration of the previous permit. Petitioner then "evaluated many of [their] alternatives" and in February of 1979 petitioned for a variance "limited in time ... to examine the possibilities, to see what could be done about bringing the boilers into compliance" (R.20-1).

Petitioner's boilers have not been significantly modified in 30 years (R.18), and are operated with no air pollution control equipment (R.41). In June of 1979, Petitioner met with the Agency. It was determined that there was a possibility of complying by derating the boilers. Tests at lower ratings were performed in July of 1979, and Petitioner resubmitted its permit application and filed a Second Amended Petition for Variance on August 7, 1979 (R.22).

Petitioner received two complaints about its particulate emissions from neighbors in December of 1978. During the Summer of 1978 Intervenor M. E. Gillard called Petitioner's Plant Manager Youmans, who visited the neighbor's site (R.46-7).

On June 22, July 20, 22 and 24, and August 25 and 30, 1979, Petitioner's emissions were particularly bothersome to neighbors (R.144-5, 160-1, 173-5, 183). On June 30, 1979 Union ceased its manufacturing process (R.42). During August, 1979, Union removed its equipment and the facility's steam consumption decreased (R.39-40).

The problems Petitioner faces in complying include a high steam demand and a fluctuating particulate emission amount when its five planishing presses are in operation. Opacity readings vary with the type of coal used (R.23-4, 32). The fluctuation occurs five times during 8-hour periods of the operation of the press (R.29-30). Fuel conversion is expensive for Petitioner and apparently is in short supply (R.24,49); installing clean-up equipment is likewise expensive (R.25).

Petitioner has chosen the following course of compliance: reduce steam production by burning 5,000 tons or less of coal per year; limit the amount of steam to the planishing press to level the fluctuating steam load and to limit the draw of the press; operate the press at lower pressures to level the fluctuating steam load; further insulate the boilers; install smaller steam valves to reduce the size of the fluctuating steam load (R.25-7); install a dry sprinkler system; not heat the buildings which Union had occupied (R.36); and soot blow the boiler more frequently (R.76).

At the hearing, Petitioner introduced no evidence regarding the environmental impact a variance would have (R.22). It has conducted no studies on environmental effects (R.37). It alleges that operating at derated levels would reduce the particulates emitted to an amount which would enable Petitioner to be in compliance. It is by virtue of this allegation that Petitioner renewed its application for a permit and its petition for a variance (R.22).

Regarding the fluctuating demand, testing at various fluctuating loads may not be possible (R.69, 89-90). Tests results at steady state cannot be compared with test results under fluctuating demand (R.115). Petitioner alleges that tests show that it would be in compliance if it could use the same coal it has been using and could operate the boilers at less than 25,000 pounds of steam per hour (R.33), which is the maximum capacity of the boilers (R.21). Petitioner plans to experiment with coals having 0.70%, 0.83% and 0.87% sulfur content (R.65-6).

The normal operating level of the boilers since June of 1979 has been 5,000 pounds of steam per hour when the planishing presses are not operated, and 12,000 pounds per hour, for three to four minutes, when they are operated (R.34-5, 61). Petitioner projects a "normal operation" during the winter months of 10,000 pounds per hour; no steam rate was projected

for operation of the presses during the winter months (R.34-5). There are opacity problems operating at levels of less than 10,000 pounds (R.35-6); the boilers become less efficient due to nonuniform temperatures within the boiler casings and particulate emissions are increased (R.63).

It is the Agency's position that, since the ash content of the coal Petitioner is experimenting with is unknown to the Agency, it cannot ascertain whether Petitioner will violate the particulate emission standard. However, the Agency believes that operating at 10,000 pounds of steam per hour under steady state conditions will not violate the standard (R.92, 96-7), although it has evidence that opacity levels will be unacceptable at less than 10,000 pounds of steam per hour (R.93). The Agency is uncertain about violations while operating at greater than a 10,000 pound level (R.93, 119), although three out of the six tests conducted at a 15,000-pound level on July 17-19, 1979 showed results which were in compliance (R.60, 98). There are no test results for a 12,500-pound level (R.99-100). There is no evidence of violation at levels less than 10,000 pounds (R.100-1), although there are boiler operating difficulties at 5-6,000 pounds (R.71). The Agency does not recommend a variance at less than 10,000 pounds per hour (R.93), but does not maintain that that is the only level at which Petitioner can achieve compliance (R.115-6).

The nature and impact of the particulate emissions from Petitioner's facility were described at length by a first few of the intervenors, speaking for the rest. Tens of photographs of motor vehicles, mobile homes, plants and human bodies were admitted into evidence at the hearing (Intervenors' Exhibits 1-8). The particulates were described as having a "base" (R.173-5), as being like "coal soot with grease in it" (R.145). On at least July 22, 1979, it fell like "black snowflakes" (R.129, 150-2). One could feel the particles "hit you in the face in [sic] the arms" (R.180). It imbeds in everything (R.145, 164, 173-5). It is impossible to wipe off because it just smears (R.164, 176).

The particulates prevent the neighbors from enjoying the woods (R.150) and even from going outside (R.145, 160-1). It makes plants more susceptible to attack from varmints and weakens plant growth (R.148-9). One can't hang a wash outside to dry (R.159-60). It gets on bare feet from being on the grass (R.183), and it can sift through pants, boots, to socks and otherwise ruin shoes and clothing (R.145). It gets on car handles and trailer home railings (R.145) and on auto upholstery (R.160-1). It pits cars and boats (R.173-5). It got on the photographer's camera lenses on July 22, 1979 (R.145-6, 189).

The mobile homes must be cleaned constantly because the particles sift into them (R.149-50). Air conditioners,

if possessed, must be run constantly. One neighbor awoke in the morning to find that the soot had sifted through the screen on her bedroom window and had covered her arms and bed; she realized she had been breathing it all night (R.160-1). Another neighbor without an air conditioner realizes that she breathes it all night in the summer months (R.184). When pillow cases are washed, dark, greasy spots remain (R.183). One neighbor has constant headaches since having moved into the court a year ago, although she cannot state that the soot causes them (R.150-65).

It is now worse than it was a year ago, and "ten times" as bad as when Bake-O-Lite occupied the facility (R.150-2). Apparently Plant Manager Youmans agreed in a December 19, 1978 letter to the Intervenors not to emit matter unless the wind velocity was at least 6 mph and the wind direction was not from the South. Intervenors believed such action would alleviate the problem (R.157). It was after this letter, and after Union had ceased operations, that in the Summer of 1979 the problem increased. In the absence of evidence to the contrary, the Board finds that the presence of carbonaceous particulate matter poses a breathing hazard to those forced to inhale the material.

The particles are similar to that particulate matter normally emitted from coal-fired burners and are not similar visually to emissions from other stacks in the area (R.187-8). The particles can be seen falling as they come from Petitioner's stack (R.130-1, 159-60, 166-78); they take 30-45 seconds to fall (R.180). There are no other stacks in the immediate area and open burning is not allowed (R.130-1).

The Board denies Petitioner a variance from Rule 203(g) (1)(B). Petitioner has not proven that immediate compliance imposes an unreasonable hardship and there is no evidence that a cost of compliance of \$300,000 is such sum as would force Petitioner to cease operations or prevent it from leasing its facility. This is especially true in light of the dangers which exist and which have existed at least since July of 1979 to the health of people and of all living things. Not only must people and animals breath particles which are visible as snowflakes are visible, but plant life must endure the matter. Not only must people choose to breathe it or to stay indoors with an air conditioner running, but they cannot keep their clothing, furnishings, vehicles, homes and other personal property clean without constant, daily attention. Such destruction of property and interference with human life and welfare is what pollution regulations are adopted to prevent and, where a balancing of rights is applicable, to curtail.

Although there is evidence that to operate Petitioner's boilers at 10,000 pounds of steam per hour, a derating from 25,000 pounds, would not violate Rule 203(g)(1)(B), there is

evidence that operating at less than that rate -- specifically, between 5 and 6,000 pounds per hour -- would violate the rule. Petitioner states that since June of 1979 its normal operating level has been 5,000 pounds per hour except when the planishing press is on for three or four minutes; in the winter it expects a normal operating level of 10,000 pounds per hour. In at least the summer months, then, Petitioner will be violating Rule 203(g)(1)(B). But it is in the summer months when enjoyment of neighboring property is most affected and when health effects are most demonstrable.

The Board notes that Petitioner's boilers have no air pollution control equipment installed and that these boilers have not been substantially modified in 30 years. Looking at the fact that since December of 1977 Petitioner knew that the Union permit would expire on February 28, 1979, the denial of a variance can present no hardship.

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

ORDER

It is the Order of the Pollution Control Board that American Hoechst Corporation's petition for variance is hereby denied.

Mr. Werner abstained.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 15th day of November, 1979 by a vote of 3-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board