

ILLINOIS POLLUTION CONTROL BOARD
April 9, 1992

MONTEREY COAL COMPANY,)
)
 Petitioner,)
)
 v.) PCB 91-251
) (Variance)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY,)
)
 Respondent.)

OPINION AND ORDER OF THE BOARD (by B. Forcade):

This matter comes before the Board on a petition for variance (Pet.), filed on December 19, 1991, by Monterey Coal Company (Monterey). Monterey seeks a variance from the chloride discharge limit specified in 35 Ill. Adm. Code Sec. 406.203 (c)(1)(A) and embodied in the petitioner's NPDES permit. (Pet. Ex. 1.) Petitioner is requesting a variance to increase the current 1,000 milligrams per liter (mg/l) discharge limit of chloride to 1,200 mg/l at its No. 2 mine for a period not to exceed two years. The purpose of this variance is to allow petitioner to demonstrate, through the use of actual stream studies, that increasing the discharge limit to 1,200 mg/l will not cause an adverse effect on the environment in and around the receiving stream (the Grassy Branch of Sugar Creek). (Pet. at 1.)

The petitioner waived its right to a hearing on the merits of the variance petition and no hearing was held. (Pet. 10). On January 22, 1992, the Environmental Protection Agency (Agency) filed its recommendation (Ag. Rec.) in support of granting the variance with certain conditions. The conditions recommended by the Agency require the petitioner to perform certain studies, manage discharges and submit progress reports to the Agency.

Pursuant to Section 37 of the Environmental Protection Act (Act) the Agency caused notice to be published and sent to the required parties. (Ag. Rec. at 3.) The Agency received one comment from a neighboring landowner expressing concern about the effects of increased chloride levels on groundwater quality and livestock in the area approximately one mile northeast and upstream from the water discharge point. (Res. Ex. 1.)

THE FACILITY

Monterey is an operating division of Exxon Coal USA, Inc., operating two large underground mines in the state of Illinois. (Pet. at 1.) The No. 2 mine is located one mile south of the City of Albers in Clinton County, Illinois. (Pet. at 2.) This operation employs approximately 453 people at the mine with a support staff of 56 people in Monterey's Carlinville office.

(Pet. at 2.) Petitioner mines between five and six million tons of coal a year, approximately one-half of which is produced by the No. 2 mine. (Pet. at 2.)

Monterey discharges water, used in its coal processing, into Grassy Branch, approximately 4,600 feet from the stream's confluence with Sugar Creek. (Ag. Rec. at 5.) Grassy Branch is classified as a 7-day, 10-year, zero flow stream. (Ag. Rec. at 5.) Sugar Creek, near the confluence, is classified as a 7-day, 10 year, low flow of 0.2 cfs. Sugar Creek discharges into the Kaskaskia River. (Ag. Rec. at 5.) The nearest public water supply intake is approximately 10 miles downstream. (Ag. Rec. at 5.) The use of the downstream water is limited primarily to livestock watering. (Ag. Rec. at 5.)

BACKGROUND

Water and chlorides are contained in the coal and rocks which are unavoidably mined with the coal. (Pet. at 2.) During the coal cleaning process, chlorides go into solution in the process water and build up in the coal preparation plant water circuit. (Pet. at 2.) Clean coal goes into clean coal silos and is later loaded onto unit trains for customer delivery. (Pet. at 2.) Coarse refuse (from 28 mesh to 4" diameter) washed from the coal is transferred to a refuse disposal area by conveyor and trucks. (Pet. at 2.) Fine refuse (less than 28 mesh) is pumped into a slurry pond. (Pet. at 2.) Solids settle to the bottom of the slurry pond and clarified water is decanted to a recirculation lake. (Pet. at 3.) Water is pumped from the recirculation lake to the coal preparation plant for reuse in processing more coal. (Pet. at 3.) As the process is repeated and more coal is cleaned, the chloride concentration in the coal preparation plant water circuit increases. (Pet. at 3.) To decrease the concentration of chlorides the water is discharged from the recirculation lake into Grassy Branch. (Pet. at 4.)

When there is sufficient rainfall or alternate sources of dilution water to be added to process water exhibiting significant chloride levels, petitioner is able to maintain its discharge of water within the 1,000 mg/l limit. (Pet. at 3.) However, petitioner believes there will not be enough precipitation in the future to operate in compliance with the 1,000 mg/l limit. (Pet. at 3.) Petitioner has studied and continues to study the surface and groundwater sources of potential dilution water, but currently believes the available quantity is insufficient to operate in compliance with the chloride standard. (Ag. Rec. at 3.) The petitioner believes that if a chloride variance of 1,200 mg/l is granted, by applying existing dilution sources, it will be able to discharge on a dependable basis without violating its permit or adversely impacting the receiving stream. (Pet. at 4.)

APPLICABLE LAW

Section 406.203(c)(1) establishes procedures water quality based permit conditions for mine operations and reads as follows:

(c) The Agency shall establish permit conditions under this Section if all of the following conditions are met:

1. The applicant proves to the Agency that the discharge will not cause an adverse effect on the environment in and around the receiving stream, by either:

A. Demonstrating that the discharge will contain a concentration less than or equal to 3500 mg/l sulfate and 1000 mg/l chloride; or,

B. Through actual stream studies.

Monterey is presently operating with a NPDES permit that allows discharges with a concentration of chloride under 1,000 mg/l. (Pet. Ex. 1.) Monterey has not reported any discharges above the discharge limit. (Pet. Ex. 2.) Monterey is requesting a variance in order to conduct the stream studies required by Section 406.203(c)(1)(B) to allow a discharge level above the 1,000 mg/l limit. (Pet. at 1.) The variance requested is for a period of two years to conduct an intensive stream survey (twelve months), analyze data and prepare report (six months), and obtain a permit modification based upon that study (six months). (Ag. Rec. at 6.) The study will include impact on human, plant and animal life in the affected area, including water quality. (Pet. at 6.)

HARDSHIP

In considering any variance the Board determines whether a petitioner has presented adequate proof that immediate compliance with the Board regulations at issue would impose an arbitrary and unreasonable hardship. (Ill. Rev. Stat. 1991, ch. 111 1/2, par 1035(a).) Furthermore, the burden of proof is upon the petitioner to show that the claimed hardship outweighs the public interest in attaining compliance with regulations designed to protect the public. (Willowbrook Motel v. Pollution Control Board (1977), 138 Ill. App. 3d 343, 481 N.E.2d 1032.)

When sufficient dilution water is not available to be added to the plant circuit, Monterey is unable to reliably discharge within the permit conditions and chloride levels build up in the preparation plant circuit at or above the 1,000 mg/l discharge level. (Pet. at 3.) As more coal is processed the chlorides continue to build up in the system and petitioner is unable to discharge without risking a violation of the permit condition.

(Pet. at 3.) As chlorides build up in the plant water circuit, deterioration of plant equipment will occur, due to the corrosive effects of chloride. (Pet. at 5.)

Currently, the recirculation pond is exhibiting chloride levels at or slightly above concentrations of 1,000 mg/l. (Pet. Ex. 3.) The slurry ponds are experiencing concentrations approximately at or in excess of 1,200 mg/l. (Pet. Ex. 3.) Due to excess chloride concentration in the coal preparation water circuit, petitioner is currently storing in excess of 200 million gallons of water on its property. (Pet. at 4.) Petitioner currently has insufficient sources of dilution water, to reduce the chloride content of this excessive water inventory. (Pet. at 4.) Petitioner believes that it will not have sufficient rainfall or dilution water from other sources in the future to discharge water from the system on a dependable basis and in compliance with the discharge requirements. (Pet. at 3.)

It is not practical for petitioner to continue to store process water in order to remain in compliance due to the space requirements of storing such quantities of water. (Pet. at 5.) If water is not discharged the concentration of chlorides continues to increase requiring a greater amount of dilution water to be added to the plant circuit to maintain discharges at the 1,000 mg/l limit. (Pet. at 5.) The accumulation of chlorides in the process water circuit will also result in deterioration of plant equipment. (Pet. at 5.)

ENVIRONMENTAL IMPACT

The Agency is unaware of any public water supplies which would be adversely affected if this variance request is approved. (Ag. Rec. at 5.) Stream studies conducted by other coal producers in Illinois have demonstrated that increases in the chloride levels to the magnitude requested do not adversely affect stream conditions. (Pet. at 7.) The petitioner is requesting a 20% increase in the discharge limit of chloride permitted by 406.203 (c)(1)(A). The Agency is unaware of any studies which link elevated chloride levels with adverse effects on livestock. (Ag. Rec. at 5.) The Agency believes that the impact on the environment will be minimal. (Ag. Rec. at 6.)

COMPLIANCE PLAN

A variance by its nature is a temporary reprieve from compliance with the Board's regulations. (Monsanto Co. v. IPCB (1977), 67 Ill.2d 276, 367 N.E.2d 684.) A variance petitioner accordingly is required, as a condition to grant of variance, to commit to a plan that is reasonably calculated to achieve compliance within the term of the variance. (City of Mendota v. IPCB (1987), 161 Ill. App. 3d 203, 514 N.E.2d 218.) Nevertheless, the Board has found that in some exceptional

circumstances variance may be granted even though petitioner does not have a final compliance plan. Included have been the circumstance where technology for compliance did not exist, and petitioner sought the time provided under the variance to search for new technologies (e.g., Mobil Oil v. IEPA (Sept. 20, 1984, 60 PCB 99; IPC, Clinton Plant v. IEPA (May 22, 1989), PCB 88-97, 100 PCB 181); where additional time was necessary for a proper assessment of environmental impact (e.g., Amerock v. IEPA (Nov. 11, 1985), PCB 84-62, 66 PCB 411; Zeigler Coal v. IEPA (Aug. 22, 1991), PCB 91-12, slip op.); or where the term of the variance was of an exceptionally short duration (e.g. General Motors - Electromotive Division v. IEPA (February 19, 1987), PCB 86-195, 576 PCB 59.) Moreover, in each of these exceptional circumstances the Board has required assurance, commonly through conditions attached to the grant of variance, that negative environmental impact during the term of the variance be minimal and temporary.

Monterey proposes during the term of variance to assess, through an intensive stream survey, the impact of possibly higher chloride concentrations on the receiving stream, and to use these data to design a long-term solution to its chloride problem. Additionally, the Agency recommends, and Monterey accepts, that Monterey carry out the following additional investigations:

a. The possibility of constructing additional groundwater wells to provide dilution water for the recirculation lake.

b. The construction of a pump station on Grassy Branch for pumping dilution water during periods of high flow, either as a primary source or to augment other surface or groundwater sources.

c. The construction of a pump station on Sugar Creek for pumping dilution water either as a primary source or to augment pumpages from other surface or groundwater sources.

d. A study of the current water handling and storage capabilities, to include the possibility of increasing the volume of water in the Slurry #2 area from low chloride surface and groundwater sources.

e. The feasibility of constructing a discharge pipeline directly to Sugar Creek or the Kaskaskia River to discharge higher chloride water directly to those higher flow streams.

The results of these studies are to be used in developing a compliance plan incorporating the information obtained from two or more of the above studies.

CONSISTENCY WITH FEDERAL LAW

Petitioner states that the variance requested is consistent with the Clean Water Act (33 U.S.C. 251 et. seq.) USEPA Effluent Guidelines and Standards and other Federal Regulations, or any area-wide waste treatment management plan approved by the Administrator of the USEPA, pursuant to Sec. 208 of the Clean Water Act. (Pet. at 9.) The Agency finds that there is no conflict in granting this variance with other state or federal laws. (Ag. Rec. at 6.)

DISCUSSION

The Board does not grant variance where there is no need for variance, as for example where there is no demonstration that the petitioner is out of compliance with the standard at issue. (Village of Wheeling v. IEPA (July 10, 1980), PCB 80-59, 39 PCB 53; City of Rolling Meadows v. IEPA (July 10, 1980), PCB 80-60, 39 PCB 62; The Village of Elk Grove v. IEPA (January 10, 1985), PCB 84-158, 62 PCB 295; City of West Chicago v. IEPA (June 13, 1985), PCB 85-2, 64 PCB 249; Village of Minooka v. IEPA (September 20, 1985), PCB 85-100, 65 PCB 527; City of Spring Valley v. IEPA (January 5, 1989), PCB 88-181, 95 PCB 57; Village of North Aurora v. IEPA (February 8, 1990), PCB 89-66, 108 PCB 25.) However, the Board did grant a variance in Sonoco Products Co. v IEPA (September 8, 1988), PCB 88-60, 92 PCB 97, where the petitioner was in compliance but would have been in noncompliance at anticipated increased production levels. Sonoco had definite programs to increase production and achieve compliance during the variance period. The Board found that in light of this and other factors the petitioner would suffer arbitrary or unreasonable hardship if the variance were denied. (Id. at 92 PCB 102.)

In the case at hand, while Monterey is presently in compliance, Monterey's retained water exceeds discharge limitations. The accumulation of chloride in the process water circuit will damage plant equipment. Monterey does not presently have additional sources available to dilute this water which must be discharged to avoid equipment damage. Under the present circumstances we find that noncompliance, as in Sonoco, is imminent. Thus we conclude that Monterey has shown the variance to be necessary. Further, the denial of the variance would prohibit Monterey from conducting a stream study to show whether an increase in the chloride discharge level would cause an adverse effect on the environment. Without the results of the stream study, Monterey would be unable to obtain a change in the allowed discharge level in its NPDES permit. The Agency-recommended conditions of this variance provide a program to monitor the stream study and achieve compliance.

The Board has also held that difficulty in maintaining compliance and uncertainty of success in achieving continued

compliance are insufficient grounds for grant of a variance. (Marathon Oil Co. v. IEPA (January 9, 1992), PCB 91-173, PCB _____.) In Marathon the petitioner sought a variance for the time period necessary for the completion of a site-specific rulemaking pending before the Board and was not related to petitioner's plan to achieve compliance. Compliance would be achieved through the Board's grant of site-specific relief. Here, unlike the situation presented in Marathon, ultimate compliance with the regulation is intended to be achieved through the variance. Another distinction that can be made between Marathon and Monterey is that while both are able to comply with the applicable standard, the conditions at Monterey show that non-compliance is imminent while Marathon's non-compliance was purely speculative. Monterey is presently experiencing excessive concentrations of chloride which Monterey is unable to discharge where Marathon was concerned with the possibility of future increases to its current levels.

Monterey has requested that the variance cover a period of two years. The two year period is based on one year to collect data, six months to compile and analyze data and six months to obtain a change in the permit condition. After the data has been collected, Monterey is capable of complying with the discharge standard. Compliance with the 1,000 mg/l discharge level is possible while the stream study report is being prepared and while a permit modification is being sought. Monterey has been able to maintain compliance and has presented no reason why it could not continue to do so, even though compliance may be difficult until a modified permit is issued. Granting the variance for the time period after the stream study has been performed would result in this variance becoming a form of interim relief while Monterey was seeking a permit modification, when compliance is possible.

CONCLUSION

The Board finds that the petitioner has presented adequate proof that immediate compliance with Section 406.203 (c)(1)(A) of the Board's rules and regulations would impose an arbitrary or unreasonable hardship. The steadily increasing concentrations in the processing water along with insufficient sources of dilution water demonstrate that non-compliance is imminent. The variance is written to grant an increase in allowable chloride discharge concentrations to 1,200 mg/l. The variance will be issued to cover a 15 month period in which Monterey is to conduct a one year stream study. Fifteen months is allowed in order for Monterey to arrange the study and assure that sufficient data is collected. Without the stream study, envisioned by Section 406.203 (c)(1)(A), petitioner cannot demonstrate the environmental impact that an increase in the chloride discharge level will have on the receiving stream. A demonstration of the

environmental impact is necessary for Monterey to apply for a permit with a modified discharge level. Finally, the variance is written with additional conditions which require the Monterey to explore additional sources for dilution water.

This opinion constitutes the Board's finding of fact and conclusions of law in this matter.

ORDER

Monterey is hereby granted a variance with conditions from the chloride discharge limit in 406.203 (c)(1)(A) and contained in its NPDES permit. This variance authorizes a chloride discharge limit of 1,200 mg/l. This variance applies only to discharges from Monterey's No. 2 mine in Clinton County, Illinois. The variance is subject to the following conditions:

- a. The variance shall terminate on July 9, 1993 or upon the completion of the collection of data in the 12 month intensive stream study, whichever shall occur first.
- b. Petitioner shall conduct a stream study sufficient to determine if the discharge of elevated chloride will or will not cause an adverse effect on the environment in and around Grassy Branch, the receiving stream.
- c. Petitioner will confine, to the extent practicable, its discharges to periods where the Grassy Branch has enough flow to avoid or minimize any impact of higher chloride concentrations. Further, dilution from existing sources must continue to be used to manage concentration levels.
- d. Concurrently with the intensive stream survey, the petitioner shall conduct the following studies addressing the reduction of chloride in the discharge water, or the controlled discharge to a higher flow stream:
 1. The construction of additional groundwater wells to provide dilution water for the recirculation lake.
 2. The construction of a pump station on Grassy Branch for pumping dilution water as either a primary source or to augment pumpages from other surface or groundwater sources.
 3. The construction of a pump station on Sugar Creek for pumping dilution water either as a primary source or to augment pumpages from other surface or groundwater sources.
 4. A study of the current water handling and storage capabilities, to include the possibility of increasing the volume of water in the Slurry #2 area from low chloride surface and

groundwater sources. The feasibility of constructing a discharge pipeline directly to Sugar Creek of the Kaskaskia River to discharge higher chloride water directly to those higher flow streams.

e. Together with the results of the intensive stream survey and the studies addressed above, the petitioner shall submit to the Agency either:

1. An application requesting an increase in the permit effluent limitations for chlorides, in accordance with 35 Ill. Adm. Code 406.203, or

2. An application which includes a complete compliance plan to reduce the chloride concentration to less than 1,000 mg/l, to comply with 35 Ill. Adm. Code 406.203(c)(1)(A).

f. Petitioner shall make interim progress reports to the Agency at 90-day intervals beginning at 90 days from the Board order. These interim progress reports shall address all the aforementioned studies and should be sent to:

Illinois Environmental Protection Agency
Mine Pollution Control Program
2200 Churchill Road, P.O. Box 19276
Springfield, Illinois 62794-9276

g. All other uncontested provisions of the NPDES permit and effluent limitations shall be met.

h. Petitioner must send to the above address, a certificate of acceptance of this variance by which it agrees to be bound by the terms and conditions contained herein.

This variance will be void if the petitioner fails to execute and forward the certificate within the 45 day period. The 45 day period shall be in abeyance for any period during which the matter is appealed. The form of the certification shall be as follows

CERTIFICATE OF ACCEPTANCE

I, (We), _____, having read the opinion and order of the Illinois Pollution Control Board, in PCB 91-251, dated April 9, 1992, understand and accept the said opinion and order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable

Petitioner

By: Authorized Agent

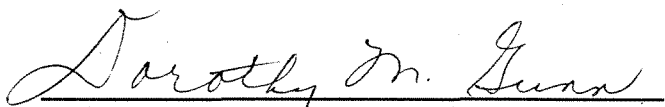
Title

Date

Section 41 of the Environmental Protection Act (Ill. Rev. Stat. 1991, ch. 111 1/2 par. 1041) provides for appeal of final orders of the Board within 35 days. The Rules of the Supreme Court of Illinois establish filing requirements.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 9th day of April, 1992, by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board