

ILLINOIS POLLUTION CONTROL BOARD
July 24, 1980

SANCHEZ ENERGY CORPORATION, INC.,)	
)	
Petitioner,)	
)	
v.)	PCB 80-45
)	
ENVIRONMENTAL PROTECTION AGENCY,)	
)	
Respondent.)	

OPINION AND ORDER OF THE BOARD (by D. Satchell):

This matter comes before the Board upon a petition and amended petition for variance filed March 17 and May 2, 1980 by Sanchez Energy Corporation, Inc., (Sanchez) an Illinois business corporation. The pleadings request variances from Section 12(a) of the Environmental Protection Act (Act), Rules 605(a), 605(b) and 606(a) of Chapter 4: Mine Related Pollution (Chapter 4 or Mine Rules) and Rules 203(a), 203(b), 203(f) and 408(b) of Chapter 3: Water Pollution (Chapter 3), as these rules apply to discharges from Sanchez's proposed coal recovery operations at the abandoned Little Dog Mine. On June 2, 1980 the Environmental Protection Agency (Agency) recommended that the variance be granted in part with conditions. The hearing was waived and no public comment has been received.

Pending before the Board is a proposal to adopt a new version of Chapter 4 (Adopted Rule, Final Order, Order of July 24, 1980; R76-20 and R77-10). In this Opinion reference is made to the rules in both old and new Chapter 4. It is the Board's intention that any variance granted will be construed as a variance both from the old and new Mine Rules. The following table shows the numbers of the comparable applicable rules in the old and new versions of Chapter 4:

<u>Old Chapter 4</u>	<u>New Chapter 4</u>
605(a) - - - - -	605
605(b) - - - - -	607
606(a) - - - - -	606(b)

The Little Dog Mine is situated just outside the City of Gillespie in the NE ¼ of Sec. 13, T. 8 N., R. 7 W., 3 PM, Macoupin County (Rec. Ex. 7). It is an underground coal mine which was apparently abandoned in November of 1968. The previous owners abandoned the site without performing reclamation work of any

nature (Pet. 1; Rec. 2). The Agency brought an enforcement action against a previous owner of the site. This was dismissed because the Agency was unable to obtain service upon the Respondent (EPA v. Harold D. Woods, PCB 77-338, 33 PCB 5, March 1, 1980). The site has since been purchased from an intermediate owner by Mr. Joseph Sanchez, who is an officer and director of Petitioner Sanchez.

The 47.85 acre site presently consists of three abandoned slurry ponds and two gob piles from the operations associated with the abandoned mine (Rec. Ex. 7, 2). Mine spoil and coal fines cover the entire site (Rec. Ex. 5, 1). Recoverable coal slurry occupies 31.3 acres (Rec. Ex. 5, 3). Mr. Sanchez owns at least six acres adjacent to the site (Rec. Ex. 7, 2).

Prior to mining the site was a relatively flat plain with mild drainage, predominantly toward the east, to an unnamed drainage ditch tributary to Bear Creek, Cahokia Creek and the Mississippi River (Rec. Ex. 2, Ex. 10, 1; Ex. 11). The site now includes very steep slopes on the gob piles. The permit application identifies six major drainage areas (Rec. Ex. 10, 6). Drainage leaves the site to the east, west and northwest, with identifiable point sources only at the southeast and northeast corners (Rec. Ex. 10, 1).

Below is a summary of analyses of water taken on and around the site (Rec. Ex. 1). These results are similar to those quoted by Sanchez (Amended Pet. 2). The results of Agency analyses at stations 8 through 11 are not included since these were taken downstream of the site. These results show levels of these parameters for the most part decreasing with distance from the site, although mostly in excess of the applicable water quality standards for the unnamed ditch even on the far side of Gillespie, about 1.5 miles downstream. The results of analyses 1-7 from the site and vicinity are as follow (Rec. Ex. 1):

	mg/l (except pH)		
	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Total Acidity	300	1030	2280
Total Alkalinity	0	0	0
Total Iron	14.2	77.6	154
Manganese	1.2	12.0	33.7
Residue on Evaporation (ROE)*	650	11,700	54,000
Sulfate	330	8000	42,000
Suspended Solids (TSS)	28	1000	3390
Zinc	0	21	82
pH	1.8	----	3.0

*The pleadings do not indicate whether the data are for filterable, non-filterable or total ROE. Filterable ROE is similar to total dissolved solids (TDS).

The applicable effluent and water quality standards of Chapters 3 and 4 are summarized as follows:

	mg/l (except pH)		
	<u>Water Quality Standard</u>	<u>Effluent Standard</u>	
	<u>Ch. 3⁽¹⁾</u>	<u>Old Ch. 4⁽⁴⁾</u>	<u>New Ch. 4⁽⁵⁾</u>
Acidity	----	----(3)	----(3)
Total Iron	1.0	7	3.5
Manganese	1.0	----	----
Sulfate	500.	----	----
TDS	1000.	----	----
Zinc	1.0	5	5
Unnatural Sludge, etc.	----(2)	----	----
Settleable Solids, etc.	----	----(6)	----(6)
pH	6.5 to 9 ⁽²⁾	5 to 10	6 to 9

(1) Mine Rule 605 and Rule 203(f) of Chapter 3, except where noted.

(2) Mine Rule 605 and Rule 203(a) and Rule 203(b) of Chapter 3.

(3) Total acidity shall not exceed total alkalinity [Old Mine Rule 606(a); New Mine Rule 606(b)].

(4) Old Mine Rule 606(a).

(5) New Mine Rule 606(b).

(6) Old Mine Rule 605(b) and New Mine Rule 607.

The Agency states that it has not filed an enforcement action against the new owner pending the outcome of discussions concerning a permit authorizing carbon recovery operations on the site (Rec. 3). The Agency is of the opinion that the proposed operations will result in eventual improvement of the environment and compliance with the effluent and water quality standards. Recovery of coal as proposed is preferable to quicker alternatives such as immediate

grading and covering not only because of resource conservation but also because it will result in better long term environmental quality (Rec. 9).

Sanchez proposes to resolve the water pollution problems on the site by construction of a system of drainage ditches and completion of the partial system of dikes around the site (Rec. Ex. 5, 5). Precipitation will be diverted into Ponds Nos. 1 and 3, each with capacities of 7.2 Ml* (1.9 million gallons). These will drain into Pond No. 2 with a capacity of 4.9 Ml (1.3 million gallons). The system will provide for 205 days of detention based on average annual rainfall and several days of detention after a 10-year precipitation event (Rec. Ex. 5, 12). Pond No. 3 will discharge on the eastern edge of the site into the unnamed ditch (Rec. Ex. 3). This will apparently be the only discharge. In many years there will be inadequate precipitation to yield any discharge because of evaporation and other water losses (Rec. Ex. 5, 13).

The diversion ditches will be lined with lime to increase the pH of runoff water from the site (Amended Pet. 3). At the elevated pH iron, manganese and zinc will form insoluble hydroxides or oxides. These will precipitate in the ponds along with the suspended solids. Sulfate and TDS levels will probably not be lowered significantly by this treatment.

TDS and sulfate discharges are produced by the action of air and water on materials exposed by coal mining. These levels should decline after the site has been graded and final cover applied. Treatment for TDS and sulfate is currently available only in the form of reverse osmosis, distillation and other expensive, energy intensive techniques. The Board finds that it would impose an arbitrary and unreasonable hardship on Sanchez to require treatment for TDS and sulfate because of the limited life of the site and because of anticipated reduction of existing levels as operations proceed even without treatment.

The Agency has included with the recommendation Sanchez's Operations/Reclamation Plan (Rec. Ex. 4). During the spring and summer of 1980 Sanchez will scrape and consolidate washed out gob and slurry along the north and east edges of the site. Snow fencing or hay bales will be utilized to reduce erosion through the discharge point of the north slurry pond. Dikes will be constructed and seeded along the north and west property line. Pond No. 1 will be constructed. Mining of the north slurry pond will commence

*One megaliter equals 10^6 liters.

after this has been done. Ponds No. 2 and 3 will be constructed and vegetated and the total water control system completed before the fall of 1981.

The slurry ponds will be over-excavated so that fifteen feet of soil will be removed below the recovered slurry. This soil will be stockpiled for use as final cover after all mine waste material has been scraped into the resulting cavity. Reclamation of the north area will proceed concurrently with mining of the south slurry pond. Reclamation of the entire area is expected to be completed in the summer or fall of 1984.

The Agency has attached to the recommendation as exhibits parts of Sanchez's application for Coal Surface Disturbance Permit. The Agency has requested that these documents be incorporated into the Order by reference and that Sanchez be ordered to comply with the plans set forth in the application (Rec. 9, 12). The application is a part of the record in this proceeding and the Board has made reference to it as a part of the Agency recommendation. However, conditioning the variance on compliance with such a detailed plan would essentially place the Board in a position of writing a permit. This is the Agency's responsibility under Section 39 of the Act. Furthermore, it would require modification of the Board Order each time the application or permit were modified. Accordingly, the Board will not impose detailed operational conditions on this variance. This holding is not intended to in any way limit the Agency's authority to impose conditions on any permit granted Sanchez.

In order to assure that Sanchez continues with its plans the Board will order it to proceed diligently toward obtaining a permit from the Agency. If no permit is issued within eighteen months, the long term aspects of this variance will expire. Sanchez will be required to install within six months some form of temporary erosion control devices to reduce or eliminate gob washouts across the site boundaries from identifiable point sources. Petitioner will be required to complete the dike around the site, to construct at least one sedimentation pond and to divert all surface drainage on the site to discharge points through sedimentation ponds within eighteen months of the grant of this variance. Petitioner shall complete this last work whether a mining permit is awarded or not, and completion of it will not limit the Agency's authority to file an enforcement action if the site is still out of compliance, except in mitigation of any penalty under Section 33(c) of the Act.

The following is a summary of the relief requested in the petition and amended petition and recommended by the Agency:

Rules	Parameter	Term (Months)		Interim Standard mg/l (except pH)	
		Pet.	Rec.	Pet.	Rec.
3:203 (a) (1) 4:605 (b)	---- (2)	18	18	----	----
3:203 (b) 4:605	pH	18	18	----	2.0
3:203 (f) 4:605 (6)	Fe	18	18	----	3240
	Mn	18	18	----	3,3
	Sulfate	18	18	----	1000 (7)
	Zn	18	18	----	70
	TDS	18	18	----	1594
4:607 (3)		60	18	----	---- (3)
4:606 (b)	Acidity	18	18	11,500	11,500
	Fe	18	18	3240	3240
	pH	18	18	2.0	2.0
	Zn	18	18	70	70
	TSS (5)	18	18	3390	3390
3:203 (f) 4:605	TDS	60	36	1594	1594 (4)
	Sulfate	60	36	1100	1100 (4)
3:408 (b)	TDS	60	--	----	Deny
	Sulfate	60	--	----	Deny

(1) "3:" means Chapter 3, "4:" means new Chapter 4.

(2) Freedom from unnatural sludge, bottom deposits, etc.

(3) Agency recommends a variance only as that the rule applies to settleable solids, color and turbidity (Rec. 11).

(4) Applicable only to ditch adjacent to eastern boundary.

(5) Sanchez inadvertently requested a variance from TDS rather than TSS (Rec. 6).

(6) Petitioner at one point requested a five year variance from Rule 605 of Chapter 4 and at another point an eighteen month variance from the Rule 203(f) of Chapter 3 parameters (Amended

Pet. 1; Rec. 6). The effect of a five year variance from Rule 605 would be a five year variance from all parameters of Rule 203(f). The Board construes the request as it appears in the table: The five year variance is requested only for TDS and sulfate.

(7) This is probably a typographical error in the recommendation. The recommended eighteen month standard for sulfate should probably be 1100 mg/l, the same as the thirty-six month (Rec. 11).

The parties are in agreement with regard to the eighteen month variances from the effluent standards of Rule 606 of Chapter 4. In addition, Sanchez has requested a variance from Rule 408(b) of Chapter 3 as it applies to TDS and sulfate (Amended Pet. 1). The Agency recommended a denial because Rule 408(b) is inapplicable to mine discharges (Rec. 7). In addition, Rule 408(b) sets no limit on sulfate in effluents. The Board will also deny the requested variance from Section 12(a) of the Act.

The Board finds that Sanchez would suffer arbitrary or unreasonable hardship if it were required to immediately bring the site into compliance. The Board will award a variance with substantially the same interim standards recommended by the Agency. The long term variance for TDS and sulfate will expire not on July 1, 1983 as the Agency recommends, but on December 21, 1984, the latest date for final completion of operations forecast by Sanchez (Rec. Ex. 4; 6).

The grant of this variance will not prejudice Sanchez's right to obtain exemption from certain water quality standards through 1983 pursuant to proposed Mine Rule 605.1. Sanchez will as a condition of this variance be required to employ within eighteen months good mining practices to reduce the levels of its discharges within the meaning of Rule 605.1, whether it applies for the exemption or not. If it does so, then the Agency may further specify these good mining practices through permit conditions.

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

ORDER

1. Petitioner Sanchez Energy Corporation, Inc. is granted a variance from Rule 605 of Chapter 4: Mine Related Pollution, as that rule incorporates the water quality standards of Chapter 3: Water Pollution found in Rule

203(a), Rule 203(b) and, with regard to iron, manganese and zinc Rule 203(f), subject to the following conditions:

- a. This variance will expire eighteen months from the date of this Order.
- b. The Little Dog Mine shall not cause or contribute to levels in excess of the following in waters of the State receiving its drainage:

pH	Not less than pH 2.0 nor more than pH 9
Iron	3300 mg/l
Manganese	4 mg/l
Zinc	70 mg/l

- 2. Petitioner is granted a variance from Rule 605 of Chapter 4 as that rule incorporates the water quality standards of Chapter 3 found in Rule 203(f) with regard to TDS and sulfate, subject to the following conditions:

- a. This variance will expire December 21, 1984; provided, however, that this variance will expire eighteen months from the date of this Order unless by such date Petitioner has been issued by the Agency all permits necessary to carry out mining activities on the site.
- b. The Little Dog Mine shall not cause or contribute to levels in excess of the following in waters of the State receiving its drainage:

Sulfate	1100 mg/l
TDS	1600 mg/l

- 3. Petitioner is granted a variance from the effluent standards for acidity, iron, pH, zinc and total suspended solids (TSS) of Rule 606 of Chapter 4, subject to the following conditions:

- a. This variance will expire eighteen months from the date of this Order.
- b. Point source mine discharges from the site shall not exceed the following interim standards:

Acidity	11,500 mg/l
Total iron	3300 mg/l
pH	Range 2.0 to 9
Zinc	70 mg/l
TSS	3400 mg/l

4. Petitioner is granted a variance from Rule 605(b) (New Mine Rule 607) of Chapter 4 as that rule applies to settleable solids, color and turbidity, subject to the following condition: This variance will expire eighteen months from the date of this Order.
5. In addition to those conditions noted above, the variances granted in paragraphs 1, 2, 3 and 4 above shall be subject to the following conditions:
 - a. Sanchez shall diligently take all steps necessary to obtain from the Agency permits to carry out its proposed mining activities on the site.
 - b. Within six months of the date of this Order Sanchez shall install some form of temporary erosion control devices to reduce or eliminate gob washouts across the site boundaries from identifiable point sources.
 - c. Within eighteen months of the date of this Order Petitioner shall complete the dike around the site, construct at least one sedimentation pond and divert all surface drainage on the site through sedimentation ponds to point source discharges.
 - d. Within six months of the date of this Order the Environmental Protection Agency shall either issue any permits necessary for Petitioner to carry out condition 5(c) of this Order or shall indicate in writing that no permits are required.
 - e. Within forty-five days of the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, Variance Section, 2200 Churchill Road, Springfield, Illinois 62706, a Certificate of Acceptance and Agreement to be bound to all terms and conditions of this variance. This forty-five day period shall be held in abeyance for any period this matter is being appealed. The form of the Certificate shall be as follows:

CERTIFICATION

I, (We), _____, having read and fully understanding the Order in PCB 80-45, hereby accept that Order and agree to be bound by all of its terms and conditions.

SIGNED _____

TITLE _____

DATE _____

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order were adopted on the 24th day of July, 1980 by a vote of 5-0.

Christan L. Moffett
Christan L. Moffett, Clerk
Illinois Pollution Control Board