

ILLINOIS POLLUTION CONTROL BOARD
June 22, 1979

A & G COAL COMPANY,)
)
 Petitioner,)
)
 v.) PCB 79-40
)
 ENVIRONMENTAL PROTECTION AGENCY,)
)
 Respondent.)

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

This matter comes before the Board upon a variance petition filed February 26, 1979 by A & G Coal Company (A & G) by L. Dean Goolsby, a partner. An amended petition setting forth more information was filed on March 23, 1979, pursuant to Order of the Board of March 1, 1979. A & G operates a small strip mine near Harrisburg. It requests a variance for five years from the sulfate and TDS water quality standards of Board Rule 203(f) of Chapter 3: Water Pollution. The Environmental Protection Agency (Agency) filed a recommendation on May 9, 1979 in which it recommended granting the variance with conditions. No hearing was held.

A & G holds a Chapter 4 permit issued by the Agency and an NPDES permit (Rec. 1, 2). The strip mine is located on five acres about one and one-half miles south of Harrisburg in Secs. 22 and 27, T. 9 S., R. 6 E., 3 PM, Saline County. Petitioner has also submitted an application for a permit to mine an additional 9.6 acres (Rec. 2). A & G mines the No. 6 (Herrin) coal seam and has an estimated annual output of 15,000 to 20,000 tons. A & G has five employees and is in its first year of operation. It discharges into an unnamed ditch about one mile upstream from Pankey Branch Creek, which is tributary to the Middle Fork of the Saline River. Pankey Branch has a seven-day, ten-year flow of zero near the point of confluence with the ditch. The Harrisburg STP discharges a three month average low flow of .7 MGD into Pankey Branch one and one-half miles downstream from the ditch (Rec. 3).

Sources of A & G's discharge include pit pumpage and surface runoff from disturbed areas. These are combined and pass through sedimentation ponds before discharge. Soda ash is added to neutralize the usually acid runoff (pH 5). The soda ash increases the TDS in the water. The sedimentation ponds do not reduce either the sulfate or TDS levels. A & G estimates its average discharge at no higher than 200 GPD (Pet. 1). The Agency has requested that A & G be required to collect information on pumping

rates and frequencies to better establish the low flow discharge (Rec. 3). Apparently, most of A & G's discharge occurs during wet weather when surface water flows through the system. At this time there is ample dilution during discharge. Records of rainfall would help clarify this. The Agency believes that during dry conditions a discharge of 200 GPD would evaporate or percolate into the stream bed (Rec. 4). It could create a salt bed which would produce high TDS in the stream when flow resumed after a rain. The Agency does not discuss this problem. A & G has been unable to find a use for its waste water. Its haul road is short and it has no dust problem. It cannot find an industry to use the water. A & G indicates that it is seeking a source of fresh water to dilute its discharge. This is not generally an acceptable method of control under Rule 401(c) of Chapter 3: Water Pollution. Petitioner presents the following data:

| | Discharge | | <u>Pankey Branch Creek</u> |
|---------|----------------|----------------|----------------------------|
| | <u>Average</u> | <u>Maximum</u> | |
| Sulfate | 1796 mg/l | 1990 mg/l | 1150 mg/l |
| TDS | 2688 mg/l | 2970 mg/l | 1672 mg/l |

The Agency conducted a biological stream survey in September, 1978. Pankey Branch was classified as semipolluted above and below the ditch. Pankey Branch is limited to secondary contact usage between the ditch and the Harrisburg STP because of the nature of the intermittent stream and surrounding land uses. Below the STP, there will be little or no impact on water quality because of the small volume discharged and the large dilution. No community water supplies exist downstream before the discharge is further diluted by the Ohio River (Rec. 4).

Two regulatory proceedings are before the Board which may affect A & G's operation. R76-7 requests exemption of coal mine discharges from the TDS limits. R77-10 involves extensive changes in Chapter 4: Mine Related Pollution. The Agency agrees with petitioner that it is not technically feasible or economically reasonable for A & G to contain its TDS and sulfate at the required levels (Rec. 5). The Board finds that it would impose an arbitrary and unreasonable hardship on A & G to require it to install expensive control equipment prior to resolution of the pending rule changes.

The petition is vague about A & G's neutralization apparatus, but it is stated that soda ash is used for neutralization. Special Condition 2 of A & G's permit requires a supplemental permit to construct additional treatment facilities. The variance will be

conditioned on Petitioner's applying for such a permit. Soda ash refers to a mixture of sodium salts consisting largely of sodium carbonate. A & G should consider using hydrated lime (calcium hydroxide) for neutralization. This would involve introduction of a slightly smaller mass of TDS per unit of acid neutralized and the resulting calcium system should have a slightly higher buffer capacity than sodium. At high sulfate or calcium levels, calcium sulfate should precipitate. It has a solubility of about 3000 mg/l which should serve to limit TDS and sulfate levels.

The Agency asks that the variance be conditioned on A & G adopting good mining practices to reduce its TDS and sulfate. The Agency wants a plan from A & G within sixty days of publication of the "Code of Good Mining Practices" by the Mine Related Pollution Task Force. The variance will be conditioned on this also.

The Agency recommends a variance from Rule 605(a) of Chapter 4: Mine Related Pollution (Rec. 1). Rule 605(a) specifies that mine effluents shall not cause a violation of water quality standards (including Rule 203(f) of Chapter 3: Water Pollution). Petitioner has requested a variance only from Rule 203(f). However, on the basis of the recommendation, the variance will be granted for Rule 605(a).

ORDER

It is the Order of the Pollution Control Board that:

1. A & G Coal Company is granted a variance from Rule 605(a) of Chapter 4: Mine Related Pollution as that rule applies to total dissolved solids (TDS) and sulfates, for a period of three years or until final resolution of the regulatory proceedings (R76-7 and R77-10), whichever comes first.
2. A & G shall not exceed the following discharge limits:

| | |
|---------|------------|
| TDS | 3000 mg/l; |
| Sulfate | 2000 mg/l. |
3. A & G shall comply with the management requirements of its NPDES permit.
4. A & G shall maintain for Agency inspection records of daily rainfall and amounts discharged at the site. If it is not practicable to measure the actual discharge, A & G shall maintain a daily record of pumping together with an estimate of the amount of discharge.

5. Within forty-five days of the date of this Order, A & G shall apply for supplemental permits for its wastewater treatment facility.
6. A & G shall, within forty-five days of the date of this Order, request Agency modification of its NPDES Permit to incorporate all conditions of the variance set forth herein.
7. The Agency, pursuant to Rule 914 of Chapter 3: Water Pollution, shall modify the NPDES Permit consistent with the conditions set forth in this Order including such interim effluent limitations as may reasonably be achieved through application of best practicable operation and maintenance practices in existing facilities.
8. Within sixty days of the publication of "Code of Good Mining Practices," A & G shall submit to the Agency a report outlining specific steps it intends to take in order to achieve good mining practices and reduce its TDS and sulfate effluent levels.
9. 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 79-40, hereby accept that Order and agree to be bound by all of its terms and conditions.

SIGNED _____
TITLE _____
DATE _____

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 22ND day of June, 1979 by a vote of S.O..



Christan L. Moffett, Clerk
Illinois Pollution Control Board