

INTERIOR BOARD OF LAND APPEALS

Roblee Coal Co.

v.

Office of Surface Mining Reclamation and Enforcement

130 IBLA 268 (August 18, 1994)

Title page added by:
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ROBLEE COAL CO.

v.

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

IBLA 91-440

Decided August 18, 1994

Appeal from a decision by Administrative Law Judge David Torbett vacating Notice of Violation No. 90-11-013-01 and Cessation Order No. 90-11-013-02. Hearings Division Docket Nos. NX 90-85-R and CH 91-1-P.

Affirmed.

1. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Burden of Proof--Surface Mining Control and Reclamation Act of 1977: Evidence: Generally--Surface Mining Control and Reclamation Act of 1977: Notices of Violation: Generally

In an appeal from a decision that a prima facie case was not established, OSM has the burden of showing that the Administrative Law Judge erred.

2. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Burden of Proof--Surface Mining Control and Reclamation Act of 1977: Evidence: Generally--Surface Mining Control and Reclamation Act of 1977: Notices of Violation: Generally

In a hearing held in response to an application for review of a NOV, OSM has the burden of presenting a prima facie case that the NOV is valid by submitting sufficient evidence to establish the essential facts of the violation. If OSM establishes a prima facie case, the evidence will sustain the violation if it is not rebutted.

3. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Burden of Proof--Surface Mining Control and Reclamation Act of 1977: Evidence: Generally--Surface Mining Control and Reclamation Act of 1977: Hydrologic System Protection: Generally--Surface Mining Control and Reclamation Act of 1977: Water Quality Standards and Effluent Limitations: Generally

To sustain a NOV alleging material damage to the hydrologic balance caused by the mining operations resulting in discharge of water from an underground coal mining operation

violating State and Federal water quality laws and effluent limitations, OSM must establish that there was material damage to the hydrologic balance and that the damage was caused by the acts of the operator cited in the NOV.

4. Surface Mining Control and Reclamation Act of 1977: Administrative Procedure: Burden of Proof--Surface Mining Control and Reclamation Act of 1977: Evidence: Generally--Surface Mining Control and Reclamation Act of 1977: Notices of Violation: Generally

When OSM presents a prima facie case the mining operator need only present sufficient evidence to overcome OSM's case by proving, by the preponderance of the evidence, either that the violation cited in the NOV did not occur, or that the violation was not caused by its operations.

APPEARANCES: Wayne A. Babcock, Esq., Office of the Solicitor, Pittsburgh, Pennsylvania, for the Office of Surface Mining Reclamation and Enforcement; Dean K. Hunt, Esq., Lexington, Kentucky, and Carmine J. Cann, Esq., Clarksburg, West Virginia, for Roblee Coal Company.

OPINION BY ADMINISTRATIVE JUDGE MULLEN

The Office of Surface Mining Reclamation and Enforcement (OSM) has appealed a June 20, 1991, decision by Administrative Law Judge David Torbett vacating Notice of Violation No. (NOV) 90-11-013-01 and Cessation Order No. (CO) 90-11-013-02 issued at Roblee Coal Company's (Roblee) underground Stewart's Run Mine No. 2 (Mine No. 2), Permit No. U-2005-86, in Barbour County, West Virginia.

A hearing was held before Judge Torbett in Clarksburg, West Virginia, on October 30, 31, and November 1, 1990. Following presentation of the evidence and arguments, Judge Torbett granted temporary relief (III Tr. 111). ^{1/} In his June 20, 1991, decision, Judge Torbett summarized and discussed the evidence, and ruled that OSM had failed to present a prima facie case of the violation alleged in the NOV because it did not show that the water quality degradation was due to Roblee's unlawful action. The NOV and CO were vacated and OSM was directed to refund the civil penalty paid by Roblee.

Background

The Pittsburgh coal seam has been mined in Barbour County, West Virginia, for many years. The Consolidation No. 37 Mine (Berryburg Mine), encompassing approximately 900 acres of underground workings, was mined from before the turn of the century to as late as the 1920's (II Tr. 122).

^{1/} The three volumes of transcript of the hearing all begin with page 1. References to the transcript are given as "I Tr.," "II Tr.," and "III Tr."

In the area of the Berryburg and Mine No. 2 mines the Pittsburgh seam dips at 3.5 percent (2°) to the northwest, and the water flows through the workings and discharges from the Berryburg Mine workings at a number of points (I Tr. 27, 29; Exhs. R-6, R-7). ^{2/} A major discharge point is located in the Berryburg Tunnel (Tunnel), a railroad tunnel which intersected old Berryburg Mine workings at the headwaters of Stewart's Run (II Tr. 31). ^{3/} A second discharge point important to this case, referred to as the "Mine A discharge," "discharge A," and the "A discharge," will be referred to as "Discharge A" in this decision. Discharge A is in an unnamed tributary of Stewart's Run at approximately the same elevation as, and about a mile south of the Tunnel, and the water flowing from Discharge A had been of poor quality "for many, many years" (I Tr. 44, 56). The Tunnel and Discharge A are both outside the Mine No. 2 boundaries.

King Knob Coal Company (King Knob) conducted both surface and underground mining in the vicinity of the Berryburg Mine in the 1970's and early 1980's. In the mid 1980's King Knob applied for and received a per-mit to mine coal from Mine No. 2. This operation was to be approximately 80 acres in size and was considered a re-mine of a portion of the coal left in the Berryburg Mine. The permit was transferred to Roblee on October 6, 1986, and Roblee conducted underground operations between 1986 and April 1989, removing approximately 800,000 tons of coal. Roblee intersected old Berryburg Mine workings at several places when mining within the Mine No. 2 boundaries (Exh. R-8; Exh. R-17 at 2).

Three NOV's were issued by the West Virginia Department of Energy (DOE) on April 11, 1989. The DOE notices charged Roblee with: (1) failure to monitor groundwater flowing from Discharge A; (2) failure to follow its subsidence control plan; and (3) degrading the quality of the water coming from Discharge A (based upon Roblee's final mine workings maps, which indicated that Roblee had mined into the old Berryburg Mine workings). The first two NOV's were terminated (I Tr. 20), and the water quality degradation NOV was vacated because of a lack of conclusive evidence (I Tr. 20-21).

Roblee and DOE agreed to study the discharge from Discharge A for a year, ending on April 1, 1990, to determine the reason for apparent water quality changes, and Roblee hired Sturm Environmental Services (Sturm Services) to undertake the study (II Tr. 160; Exh. R-2). Sturm Services evaluated the discharge, hydrological, and meteorological conditions at Discharge A between 1975 and March 1990, and concluded that Roblee's mining operations had not adversely affected the quality of the groundwater flowing from Discharge A (Exhs. A-15 and A-16).

^{2/} OSM's exhibits are marked as "Exh. R-," and Roblee's are marked as "Exh. A-."

^{3/} In its Draft Final Report, Hydrologic Investigation of RobLee Coal Company Complaint (Final Report) (Exh. R-17), OSM states that the Berryburg Railroad Tunnel was constructed in 1942 and "[a]s a result, acid mine drainage from the Berryburg Mine flows through weep holes in the Tunnel walls. The mine drainage forms part of the headwaters of Stewart's Run." Id. at 3; see also Exh. A-24 at 22.

The matter before us arose on February 26, 1990, when OSM received a citizen's complaint that the water in a tributary to Stewart Run was reddish-orange in color and that its flow had doubled. Responding to the citizen's complaint, OSM Inspector Berthy issued Ten Day Notice (TDN) 90-11-433-01 to DOE on February 27, 1990, advising DOE that "acid mine drainage" originating from a King Knob site was entering a tributary to Stewart Run (I Tr. 18; Exh. R-1).

On March 8, 1990, DOE advised OSM that it would take no action in response to the TDN (Exh. R-2). DOE explained that it had been receiving periodic complaints regarding the water quality of the stream for several years, especially during periods of thaw and heavy precipitation, but that the acid mine water discharging from Discharge A originated in an old deep mine not associated with any permitted areas. It stated that during periods of heavy precipitation the pH of the water decreased and metal content increased, but that at the end of the heavy precipitation period, these problems rectified themselves.

OSM concluded that DOE's response to the TDN was inappropriate, and prepared a March 30, 1990, letter notifying DOE that its response to the TDN was inappropriate. OSM asserted that Roblee had "drastically modified the hydrologic balance by mining into and through the abandoned Consolidation No. 37 Berryburg Mine to allow water to commingle with permitted active works and to enter surface waters in the Stewart's Run drainage" (Exh. R-4). The stated basis for this determination was OSM's conclusion that when Roblee mined beyond its subsidence map limits and mined into the abandoned Berryburg Mine, Roblee caused the post-mining discharge from Discharge A to be "degraded when compared to the discharge of pre-mining data that had been collected from [Discharge A]" (I Tr. 23).

On April 11, 1990, Berthy inspected the site and found "the pH was 5.5 and Iron over 10" at Discharge A (Exh. R-5 at 4). He took upstream and downstream samples for lab analysis, and examined an old sediment pond approximately 2,500 feet below Discharge A, which was full of iron sludge and had been breached. ^{4/} On April 11, 1990, Berthy issued NOV 90-11-433-002 (I Tr. 25, 31-32; Exh. A-17 at 5;). On April 13, OSM asked for technical assistance from its Eastern Field Operations office (I Tr. 34). Roblee sought relief and a hearing was ordered.

Berthy, OSM hydrologist Felbinger, and OSM inspector Sheets returned to the site on May 2, 1990, collected water samples at Discharge A, Stewart

^{4/} Robin Jeran, President of Roblee, stated that the pond below Discharge A had been breached by either King Knob Coal or its parent company, Anker Energy, "because [they] were involved in a landfill planned by ERMS" (Energy Resources Management Systems, a subsidiary of Anker (I Tr. 76; Exh. A-6) and "wanted the pond breached so the cattails would not form a wetland" (II Tr. 128). According to Jeran, the pond was probably breached in February or March 1989, coinciding with the stream discoloration and complaints (II Tr. 128).

Run, and the Tunnel (I Tr. 101), and measured the rate of flow at Discharge A and the Tunnel (I Tr. 103). Felbinger was of the opinion that there had been no recent mining activity near the tunnel, and used the tunnel as a point of reference for analyzing Discharge A (I Tr. 102). After evaluating their data and the Sturm Services study, Felbinger, Berthy, and Sheets concluded that additional sampling, flow measurements, and time were needed to determine what was affecting the flow at Discharge A (I Tr. 104).

On June 7, 1990, OSM's Assistant Director, Eastern Field Operations, issued a report memorializing the Felbinger, Berthy, and Sheets observations (Initial OSM Report) (Exh. A-22). He advised the Morgantown Area Office that "due to the inconclusive * * * evidence they could not uphold the violation on the hydrologic balance and hold Roblee Coal Company accountable for the violation" (I Tr. 35; Exh. A-22). On June 18, OSM vacated NOV 90-11-433-002 (I Tr. 36).

On June 27, 1990, Felbinger, OSM civil engineer Michael Superfesky, and Sheets returned to the area to collect water samples and make flow measurements (I Tr. 104-05). Felbinger, Berthy, and OSM staff scientist Eric Perry returned again on July 17 and took additional flow measurements (I Tr. 37). The data collected was analyzed and evaluated in the Final Report (Exh. R-17). This report stated the following OSM findings and conclusions:

Mine flow discharges show a general response to periods of low or high rainfall. A specific precipitation and flow response relationship could not be determined.

The Mine "A" discharge and Railroad Tunnel flows are highly correlated in Phase 1 post-mining (May to September 1989). These flows exhibit seasonal variations and response to precipitation events. The Railroad Tunnel discharge is consistently greater than the Mine "A" discharge.

Phase 2 post-mining (October 1989 to June 1990) flow records do not show any correlation between the Mine "A" discharge and the Railroad Tunnel discharge. Mine "A" discharge is generally two or three times more than the Railroad Tunnel discharge. [5/]

Changes in the flow regime of the Mine "A" effluent strongly suggest that mining operations by Roblee Coal company have increased the Mine "A" discharge quantity. The higher discharge has increased pollutant loads.

5/ The accuracy of this statement is placed in question by the graph in OSM's Final Report (Exh. R-17, Fig. 3), which indicates that 11 measurements were taken between Oct. 9, 1989, and July 17, 1990. On four occasions the flows from the two discharges were almost identical. On two occasions the Discharge A flow was less than twice as great, and on only five of the 11 occasions the flow from Discharge A was two to three times greater.

Pre-mining discharges from the "A" outlet were of poor quality, typified by very acidic waters and high levels of iron, sulfate, and dissolved solids; all are characteristic of acid mine drainage.

Post-mining water quality remains poor; however, two relatively distinct phases of water chemistry have occurred.

Phase 1 post-mining (May to September 1989) was characterized by high pollutant concentrations and loads. These very poor quality discharges correlate with conditions at the Railroad Tunnel discharge and probably represent a major flushing in response to prolonged periods of high rainfall. Roblee's mine workings either had no effect on the "A" discharge or the contribution is completely masked by the major flushing events that took place in the summer of 1989.

In contrast to Phase 1, water chemistry conditions at the "A" discharge and the Railroad Tunnel during Phase 2 exhibit little or no correlation. The lack of correlation and change in flow relationships which occurred are a strong indication that the "A" discharge contains drainage from Roblee's mine works.

In Phase 2 post-mining, several major mine drainage parameters, including total iron, sulfate, and total dissolved solids are on average substantially higher than pre-mining conditions. Several modest improvements in water quality occurred as pH increased and a small quantity of alkalinity was detected in the "A" effluent. This interval represents the "best" post-mining water quality, yet overall conditions remain very poor.

Final Report at 12-13.

OSM concluded that "drainage from RobLee Coal Company's Stewart's Run No. 2 mine works has affected the quantity and quality of [Discharge A]." Id. at 13.

On August 15, 1990, Sheets issued NOV 90-11-013-01 (Exh. R-12) charging Roblee with adversely affecting the quality of the effluent from Discharge A by failing to conduct underground mining in accordance with its approved permit. Section 515(b)(10) of the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. § 1265(b)(10) (1988), was cited as the basis for issuing the NOV. Under this section, a surface mining operator must minimize disturbances to the hydrologic balance at the minesite and in associated offsite areas, and to the quality and quantity of water in surface and groundwater systems during and after surface mining operations and reclamation by using measures to avoid acid and other toxic mine drainage. The NOV also cited 30 CFR 817.42 which requires discharges from areas disturbed by underground mining activities to be in compliance with State and Federal water quality laws and with the effluent limitations

for coal mining in 40 CFR part 434. ^{6/} Roblee was directed to treat the Discharge A water to bring it into compliance with effluent limitations.

A summary of Sheets' inspection findings, attached to the NOV, stated that samples were taken at Discharge A, a required monitoring point on Roblee's permit which "field tested 5.2 pH and Fe [iron] > 7.0 mg/l" in violation of 40 CFR part 434. A water analysis report indicating a pH of 5.50 and Fe 72.6 mg/l was also attached.

On August 16, 1990, Roblee filed an application for review of and an application for temporary relief from the NOV. The Hearings Division assigned Docket No. NX 90-85-R to Roblee's application. On August 29, 1990, OSM issued CO 90-11-013-02, because Roblee had not complied with the NOV directive that Roblee install, operate, and maintain adequate facilities to treat the discharge from Discharge A. On September 6, 1990, OSM proposed the assessment of a \$1,300 civil penalty for the NOV. On October 2, 1990, Roblee filed a petition for review of the proposed civil penalty and moved to consolidate the hearing on the petition for review of the proposed civil penalty with the already-scheduled hearing on the application for review of the NOV. Docket No. CH 91-1-P was assigned to the petition for review of the civil penalty by the Hearings Division. A 3-day hearing was held in Clarksburg, West Virginia, beginning on October 30, 1990. At the end of the hearing, on November 1, 1990, Judge Torbett ruled from the bench, granting temporary relief, set a briefing schedule, and advised the parties that a written decision would follow.

Judge Torbett's Decision

After a thorough review of the testimony, Judge Torbett stated:

The burden of proof imposed upon [OSM] in this review proceeding is set forth at 43 CFR 4.1155. OSMRE has the burden of going forward to establish a prima facie case as to the facts of the violation. A prima facie case is made when sufficient evidence is presented to establish [the essential] facts which, if not contradicted, will justify a finding in favor of the party presenting the case. S & M Coal Co., 79 IBLA 350, 91 I.D. 159 (1984). * * * The ultimate issue for resolution in this case is whether [OSM] has met its burden of proof.

(Decision at 22-23).

Judge Torbett found OSM's theory that Roblee caused an adverse impact on the quality of water flowing from Discharge A rested on five assumptions: (1) the Tunnel could serve as a "clean" reference point for Discharge A; (2) a groundwater divide prevented water in Mine No. 2 from flowing to the Tunnel and prevented water from flowing between the old Berryburg workings

^{6/} 30 CFR 817.41(a) and section 38-2-14.5 of the West Virginia Surface Mining regulations were also cited. The West Virginia regulation also provides that discharge from areas disturbed by surface mining shall not violate effluent limitations.

and Discharge A; (3) groundwater from Mine No. 2 increased the discharge at Discharge A flow by 100 gallons per minute; (4) water was impounded in Mine No. 2 and discharged in large volumes during the 1989 high water period; and (5) a 1-year analysis represented by eight samples point was sufficient to establish a relationship between the two discharges and deviations in Discharge A rates of flow (Decision at 24). He found each of these assumptions to have been discredited on cross-examination and concluded that OSM had failed to present a prima facie case. Id. at 23, 24, and 27. In addition, he held that Roblee had carried its ultimate burden of persuasion (Decision at 26). He specifically noted that the water quality stated in the NOV as a basis for OSM's citation actually reflected improved pH and iron content values when compared with pre-mining values, thus indicating that Roblee's operations had caused no adverse impact on the Discharge A effluent (Decision at 27). See Darmac Coal Co., 74 IBLA 100 (1983).

Arguments On Appeal

On appeal, OSM alleges that Judge Torbett "misinterpreted the evidence" and "paid little attention to the final arguments in the case * * *" (Brief of Appellant at 17). OSM argues that Judge Torbett erroneously focused on the weaknesses in OSM's case "which were acknowledged or explained in the final analysis of the case." Id. at 18. OSM suggests that after he granted temporary relief at the hearing, Judge Torbett's "mind was already settled," and his decision indicates "that the case was given little further consideration." Id. at 18-19. OSM also argues that "[w]hether Judge Torbett properly applied the burdens of proof is more problematic." Id. at 20.

As a basis for its allegation of error, OSM contends that it established a prima facie case, shifting the burden to Roblee, which was required to prove that its operations did not cause adverse impact on Discharge A. OSM points to the change in flow relationships between the Tunnel discharge and Discharge A in support of this contention, arguing that this change suggested that the flow of Discharge A had increased significantly due to mining. It asserts that "key chemical parameters stabilized at levels at least fifty percent higher than the pre-mining baseline levels." Id. at 21. OSM contends that Judge Torbett should have ruled that a prima facie case was established by this evidence.

OSM argues that when Judge Torbett evaluated the five assumptions set out above, he misunderstood OSM's evidence and failed to give it sufficient weight. In support of its contention OSM refers to that portion of its Final Report (Exh. R-17) describing the relative change in flow for the two discharge points tabulated, asserting that the change "appeared to confirm the expected increased infiltration of water resulting from the Roblee mining." Id. at 23.

OSM asserts that Judge Torbett misinterpreted the evidence that a groundwater divide separates the Tunnel and Discharge A water, and that he misunderstood the testimony pertaining to water infiltration rates, choosing to accept testimony based on assumptions posed by Roblee's counsel on cross-examination, rather than the findings in the Final Report (Exh. R-17). Id. at 24-26. OSM suggests that Judge Torbett should have disregarded Roblee's

estimate of 200 gallons per minute groundwater infiltration for the entire 900-acre Berryburg Mine as "obviously too conservative." Id. at 26.

OSM acknowledges that "[w]ithout a baseline of flow measurements, the hydrologic evidence is * * * not * * * definitive" (id. at 28), but argues that it is scientifically reasonable to assume a link in the flow characteristics of the Tunnel and Discharge A discharges. It asserts, however, that the hydrologic evidence "is not the linchpin of OSM's case, as Judge Torbett apparently viewed it." Id. at 28.

The crucial aspect of its case, according to OSM, is the evidence of increased iron concentration in post-mining samples. According to OSM, increased iron concentrations could only be due to Roblee's mining, which exposed more pyritic material for oxidation, increasing the iron concentration in the effluent. Id. at 29. OSM states that the chemical changes observed in Discharge A "are exactly what would be expected from mining." Id. at 30. It states that "it was established that mining certainly could account for the observed changes," therefore "the only reasonable conclusion is that mining caused the observed impacts on [Discharge A]." Id. at 32.

In response, Roblee admits that the quality of the water flowing from Discharge A was poor following its mining operations, but contends that the "fatal flaw" in OSM's case is OSM's failure to demonstrate a causal connection between Roblee's mining operations and degradation of the quality of the water flowing from Discharge A (Brief of Appellee at 29). Roblee agrees with Judge Torbett's finding that OSM failed to establish a prima facie case because it relied upon a flawed method of analysis, inadequate sampling, and erroneous assumptions. Roblee also voices its opinion that when making its analysis OSM ignored the conspicuous fact that the quality of the water flowing from Discharge A had always been poor. Id. at 38.

Roblee asserts that its witnesses and exhibits demonstrated that the adverse changes in the water quality were attributable to weather-related fluctuations in the water levels in the abandoned Berryburg Mine complex rather than Roblee's mining operations. Id. at 44.

Burden of Proof

[1] The burden of proof is not the same before this Board as it was below. The appeal from Judge Torbett's decision was filed by OSM. As the appellant, OSM has the burden of demonstrating that Judge Torbett's decision is erroneous. Peabody Coal Co. v. OSMRE, 123 IBLA 195, 217 (1992); Yankee Gulch Joint Venture v. BLM, 113 IBLA 106, 129 (1990); Mallon Oil Co., 107 IBLA 150 (1989).

Prima Facie Case

[2, 3] As previously noted, Judge Torbett concluded that OSM had failed to present a prima facie case that Roblee caused a degradation of the quality of the effluent from Discharge A. It was his opinion that underlying assumptions crucial to OSM's "essential facts" of the violation cited in the NOV had been rendered invalid.

During the course of the hearing, OSM had the burden of going forward and presenting essential facts sufficient to support a finding that the violation has occurred, and its burden is satisfied when that evidence is presented. 43 CFR 4.1171(a) and 43 CFR 4.1155; S&M Coal Co. v. OSM, *supra*; Rhonda Coal Co., 4 IBSMA 124, 89 I.D. 460 (1982). If OSM establishes a prima facie case, the evidence will sustain the violation when its evidence is not rebutted. Turner Brothers v. OSM, 123 IBLA 124, 129 (1988); Tiger Corp., 4 IBSMA 202, 89 I.D. 622 (1982); James Moore, 1 IBSMA 216, 86 I.D. 369 (1979). Barring unusual circumstances, it takes little to establish a prima facie case. ^{7/} However, a notice of violation will be not be affirmed if OSM fails to meet its burden of establishing a prima facie case. Alpine Construction Co. v. OSM, 114 IBLA 232, 235 (1990).

On appeal OSM urges us to find that Judge Torbett erred in his holding that OSM had failed to make a prima facie case. I will begin with a review of the testimony elicited during examination and cross-examination

of OSM witnesses which illustrates the degree to which OSM's attribution of an increased volume of discharge to Roblee's operations was discredited.

The foundation for OSM's case is set out in its Final Report (Exh. R-17), which contains OSM's interpretation of the origin, volume, and chemical analysis of water flowing from the Berryburg and Mine No. 2 mines. This report, which was written by OSM employees Felbinger and Perry (I Tr. 128-29), analyzed the flow during the two post-mining periods identified as phase 1 (May through September 1989) and phase 2 (October 1989 through June 1990).

Using a regression analysis computer program, Felbinger made a statistical correlation between the flow and quality characteristics of the Tunnel and Discharge A during Phase 1, based upon eight flow measurements and analysis of eight samples. The authors could make no similar correlation between the flow rates or quality of the water flowing from the two discharge points from 11 measurements taken during phase 2. Based upon this analysis Perry and Felbinger drew the conclusion that the reason the two sets of data could not be statistically correlated in the phase 2 period was that Roblee had materially damaged the hydrological balance of the water flowing to Discharge A.

The Final Report states that, with one exception, the flows from Discharge A were always less than the Tunnel during phase 1, and that during phase 2 the flows from Discharge A were greater than the flows from the Tunnel. The measured flow at Discharge A on June 27, 1990, was 184 gpm, which was approximately 100 gpm greater than the amount OSM deemed statistically probable, based upon its statistical analysis of the flow relationships during the May 1989-September 1989 period. ^{8/} Roblee's mining

^{7/} See United States v. Copple, 81 IBLA 109, 134-36 (1984), for a general discussion of the reason for applying the prima facie standard.

^{8/} Pre-mining flows could not be compared because there were no pre-mining flow measurements at the Tunnel.

activity had ceased prior to the study period, and OSM attributed the correlation during phase 1 to one of two causes: either Roblee's mine work-ings had no effect on Discharge A during phase 1, or whatever contribution Roblee's mine workings was making to Discharge A was masked by major flushing events caused by heavy precipitation during phase 1.

Like Judge Torbett, I find the conclusion in the Final Report based upon five underlying premises. If any one of these premises is found invalid, the conclusion based upon those premises is rendered unfounded.

I will therefore address each of these premises.

(1) The Tunnel serves as a "clean" reference point for Discharge A

Felbinger and Perry developed the hypothesis that the flow of water from the Tunnel could be used as a point of reference for determining changes in the hydrologic balance caused by Roblee's mining. Their analysis was predicated upon the assumption that Roblee's mining activity was "the only known event which could increase the Mine A discharge" (Exh.

R-17 at 4, 6). Based upon numbers generated by the computer program, Felbinger concluded that a regression coefficient of 0.9 generated for the first period indicated a reasonable correlation between the two flows. In turn, he found that the correlation coefficient of 0.06 for the second period indicating a poor correlation (I Tr. 106-07; Exh. R-17 at 4). ^{9/}

For the conclusions in the Final Report to be valid, the Tunnel discharge must represent a valid baseline for measuring the volume and quality of Discharge A water. Basically, this assumption has four parts: (1) if nothing were introduced to independently affect the volume and quality of water flowing from either source, the volume and quality of the water flowing from one can be used to predict the volume and quality of the flow from the other; (2) nothing was introduced to influence the volume or quality of the water flowing from the Tunnel that would not have an equivalent effect on Discharge A (the Tunnel is a valid baseline); (3) statistical analysis discloses a change in the quantity and quality of the water flowing from one of the discharges, and, because there has been no change in the Tunnel water, that change must be attributed to Discharge A; (4) the only influence that could have caused this change is Roblee's mining. However, if an outside factor changes the volume or quality of water flowing from the Tunnel, without having an equivalent effect on Discharge A, the independent relationship of the two discharges does not exist, the Tunnel discharge cannot be used as the basis for attributing a change in the discharge from Discharge A to Roblee's mining operations, and OSM's reliance upon its statistical analysis is rendered unfounded, depriving OSM of a prima facie case.

^{9/} It was Felbinger's opinion that both discharge flows were generally related to precipitation and recharge events (I Tr. 108, II Tr. 67, 81). Felbinger was unable to develop any computer generated correlation between precipitation and the discharge from either of the flow points.

Felbinger, who was qualified as an expert in hydrology, stated his opinion that the change in the flow regimes shown by his statistical analysis was caused by Roblee's deep mining because, Roblee mined up dip from Discharge A, there had been no mining in the area of the Tunnel since the early 1900's, and precipitation data would be the same for the Tunnel and Discharge A (I Tr. 109-10).

During cross-examination, Felbinger conceded that King Knob had done "extensive surface mining" in the Tunnel area, a fact he apparently did not know when he prepared his report (II Tr. 35-38). He acknowledged that these surface mining operations could have had an impact on the Tunnel discharge hydrology. He also admitted that the Tunnel discharge could be affected by commingling surface waters flowing into the Berryburg Mine near the Tunnel (II Tr. 67).

Perry admitted knowledge of a slurry wall installed in the Berryburg Mine during King Knob surface mining operations, and that he did not know whether this structure would impound water and impact Tunnel drainage (I Tr. 167).

During cross-examination OSM witnesses admitted that outside influences had been introduced to the Tunnel hydrologic system that independently affected the quantity and quality of the water in that system.

(2) A groundwater divide prevented water from flowing between the old Berryburg workings and Discharge A

For the conclusions reached in the Final Report (Exh. R-17) to be valid a drainage divide must exist in the Berryburg Mine near Discharge A and Mine No. 2, to keep the water flowing to the two discharges separate and independent at all times during both phase 1 and phase 2. If not, the Tunnel discharge cannot be used as a baseline for predicting flow from Discharge A. Both operations removed coal from the Pittsburgh seam, and the physical connection between Discharge A and the Tunnel existed for many years before Mine No. 2 was opened.

Perry testified that he found a drainage divide in the old Consolidation mine on "Roblee's Mine Map" and from old Consolidation Coal Company contour maps (I Tr. 158), which gave a "pretty good indication" that the Tunnel drains a portion of the Berryburg Mine but does not drain the water that develops in the area of Discharge A. However, Perry could not identify a drainage divide on those maps, and stated that there were no maps available at the hearing showing the divide (I Tr. 157-58, 163-64).

Felbinger testified that when he did the statistical analysis he made a basic assumption that there was a drainage divide near Discharge A keeping the water from the northerly portion of the Berryburg Mine from mixing with the water flowing to Discharge A. He described this divide as a ridge and identified its position on Exhibit A-23 (II Tr. 39-41). Felbinger then stated that he doubted that a groundwater divide was present (II Tr. 42-43). An examination of the contours at the point identified on Exhibit A-23 as

a divide leads to the conclusion that the feature identified can best be described as a slight dip or valley, rather than a ridge or divide.

Felbinger admitted that the change in flow patterns between phase 1 and phase 2 could have been due to water accumulating from the hundreds of acres on the "Berryburg Tunnel side" which spilled over in October 1989 (II Tr. 58-61), and that, if the water level was high enough, Mine No. 2 area and Tunnel water would commingle (II Tr. 54). This admission came after he acknowledged that the flow of water from both Discharge A and the Tunnel were higher during phase 1 (II Tr. 25), that the rainfall during the phase 1 period was more than twice the average rainfall for the area, and that he did not obtain or consider precipitation data for phase 2 (I Tr. 180). In cross-examination he also admitted that he knew that the rainfall during phase 2 was less than average, which was 47 inches per year, or 4 inches per month (I Tr. 182).

OSM presented no probative evidence that a drainage divide existed in the Berryburg Mine near Discharge A and Mine No. 2. The preponderance of the evidence presented by OSM does not support a conclusion that the water flowing to the two discharges was separate and independent at all times during both phase 1 and phase 2.

(3) The quantity of water discharge at Discharge A increased by 100 gallons per minute as a result of groundwater flowing from Mine No. 2

The authors of the Final Report (Exh. R-17, at 6), concluded that rate flow from Discharge A on June 27, 1990, was 100 gpm more than it would have been had Roblee not removed coal from Mine No. 2. The stated source of this water was surface water infiltration caused by subsidence of the strata overlying the portion of the Pittsburgh seam mined by Roblee.

Felbinger stated a belief that retreat mining with pillar extraction caused roof fracturing and collapse, allowing a greater flow of water into the mine and dramatically increasing the flow from Discharge A (I Tr. 110-11, 175). After stating that this was one of the principal conclusions set out in the Final Report, Felbinger admitted that he had made no attempt to calculate the amount of precipitation that would enter the mine workings, and had used the statistical analysis as the sole basis for his conclusion that Roblee mining had increased the rate of flow from Discharge A by 100 gallons per minute (I Tr. 178-79). Felbinger stated that he was not an expert in statistics (II Tr. 69), and was not qualified as an expert on that subject.

On cross-examination, Felbinger stated that the amount of precipitation going to surface runoff and the amount going to groundwater can be calculated from physical measurements (I Tr. 173). He then testified that the water infiltration would be no more than "slightly to moderately" increased due to pillar removal mining and that surface features, including slope, soil type, and vegetation would influence the amount of water that infiltrated the mine workings (I Tr. 175-77).

Felbinger was unable to explain how an increased water flow of 100 gpm could have come from Roblee's Mine No. 2, and conceded that attributing 100 gpm flow to the Roblee mine workings shown in the Final Report (Exh. R-17), was excessive (II Tr. 9). He then computed the amount of water attributable to Roblee's workings, assuming a 20-percent infiltration rate and runoff from 56 of the 80 Roblee acres drained into Discharge A, and found 20 gpm to be more realistic (I Tr. 181, 183-84, 185-87, II Tr. 7-8). Felbinger admitted that his conclusion that there was a 100 gpm increase in the flow of water attributable to Roblee's mining was based upon the statistical analysis and the fact that Roblee "was there" (II Tr. 77-78). The testimony elicited from Felbinger alone demonstrates that the hydrological assumptions in the Final Report (Exh. R-17) do not withstand scrutiny. At a maximum, only a very small fraction of total flow from Discharge A could be attributed to Roblee's Mine No. 2.

(4) Water was impounded in Mine No. 2 and discharged in large volumes during the 1989 high water period

There had been no mining activity in Mine No. 2 during the entire study period. In order to attribute the lack of statistical correlation during phase 2 to Roblee's mining operations the drafters of the Final Report were required to assume that the manifestation of change in the hydrologic balance caused by Roblee's mining was delayed until October 1, 1989. If this assumption is not made, or if it is shown to be without foundation, no causal connection can be made between the inability to statistically correlate the data for phase 2 and Roblee's mining operations.

When asked to explain why the change did not take place until after October 1989 (more than 6 months after mining ceased), Perry stated that the change was either "weather related" or, that OSM was "not able to separate out Roblee's contribution" prior to October 1989 (I Tr. 153). He was only able to "postulate" regarding what happened after October 1989, and stated that he had no "hard information" to tell him exactly what caused the change (I Tr. 154). He implied that it might have taken to October 1989 for the water infiltrating the mine to rise to the level of, and flow out at, Discharge A (I Tr. 154-55), but admitted that he did not know the locations of blocks and seals in the Roblee mine (I Tr. 163).

When asked to explain the lag between the end of mining and the change in Discharge A hydrology, Felbinger surmised that mine water was pumped out during mining operations to keep the mine dry, and it would take some time after closure for the mine to fill with water to the discharge level (I Tr. 111; Exh. R-17 at 6). This assumption presupposed water impoundment. Felbinger was unable to explain how 100 gallons of water per minute would impound, in view of the fact that Discharge A was lower than the lowest elevation of Mine No. 2. Referring to Exhibit R-7 (a map of the King Knob Coal Company Mine), Felbinger stated that Mine No. 2 water would not be impounded behind Discharge A (II Tr. 18-19), because the elevation of Discharge A was "below 1,385" feet (II Tr. 18, 44), which he believed to be the

lowest elevation in Mine No. 2. OSM's transcript citations do not bear out its allegation on appeal that the existence of a water barrier was conceded or agreed upon. 10/

The evidence clearly points to the conclusion that in the area of Mine No. 2, the Pittsburgh formation had been drained by old Berryburg workings. The only significant amount of water found in Mine No. 2 was encountered when Berryburg workings were intersected near the center of the mine. That water was channeled away from Mine No. 2 workings with the course of flow through the old workings being left unaltered. The weight of the evidence clearly supports the finding that the Pittsburgh seam was dry in the area of Mine No. 2.

(5) An analysis represented by eight sample points was sufficient to establish a relationship between the two discharges and deviations in Discharge A flow

To be meaningful, a statistical analysis must have sufficient data to be representative of the events analyzed. If not, the statistical correlation cannot be considered reliable. Perry testified that during phase 1 eight or nine samples were collected, but that a minimum of 18 samples should have been collected to generate a valid statistical conclusion (I Tr. 148). Perry then testified that the data from the samples collected during phase 2 could not be used to correlate with Tunnel discharge values to precipitation or to "anything we examined for that time period" (I Tr. 150-51).

The Final Report states that in October 1989 the flow rate at Discharge A became greater than that at the Tunnel. However, the graph in that report (Figure 3) indicates that the flow rate at the two discharge points was almost identical for three readings preceding and five readings following the October 1 "change," making the flow readings almost identical between August 9, 1989, and January 16, 1990. There is no marked change in the relative flow that would support choosing October 1, 1989, as the point of separation between phase 1 and phase 2, and I find no rational explanation for the apparently arbitrary selection of that date.

Thus far, I have addressed the alleged change in the volume of water attributed to Roblee's operations by OSM. On appeal OSM also points to the "change" in water quality it attributes to Roblee's mining, alleging that Judge Torbett erred when attributing too much weight to evidence regarding the volume of flow rather than the quality of the discharge. Assuming that Roblee's operations exposed a large amount of pyrite which can form acidic iron bearing effluent, the transport of these effluent to Discharge A hinges

10/ Felbinger's responses at II Tr. 42 were inconclusive. At II Tr. 210 Felbinger testified that water impounded behind the EPA slurry trench would have to have reached a 1,412-foot elevation to flow to Discharge A. At III Tr. 30, Streib gave similar testimony, with the caveat that water flowing through the Berryburg Mine workings to Discharge A would not necessarily have originated in the vicinity of the slurry trench.

on the hydrology, i.e. the migration from the source to Discharge A. As already noted, without showing that a meaningful portion of the flow should be attributed to Roblee's operations, no adverse change in the quality of the water can be attributed to Roblee.

Perry prepared the Water Quality Conditions section of the Final Report (Exh. R-17). He stated that he found the water chemistry at both discharge points essentially similar during phase 1, but that the Discharge A water characteristics "remained above the baseline levels * * * identified" by Sturm Services in 1985, prior to commencement of mining operations by Roblee (I Tr. 120-21). It was Perry's opinion that phase 2 measurements indicated a new source of acid drainage contributing to Discharge A, and that the only "reasonable" explanation was that this drainage was coming from Mine No. 2. Perry believed that Roblee's mining had exposed pyritic materials to the elements, producing acid mine drainage in quantities substantially above the pre-mining baseline period (I Tr. 126-27).

Perry's opinion was also based in very large part upon the statistical analysis results. He testified that with both discharges being from the same old mining complex, strata, and watershed, he found it "reasonable * * * that there indeed should be a relation between those two discharges" (III Tr. 70). He stated that the only event that could have caused a change in correlation between phase 1 and phase 2 was Roblee's mining (III Tr. 72). However, on cross-examination, Perry acknowledged that the Discharge A water had been bad for a long time before Roblee did its mining (I Tr. 130), and conceded that the pH and iron values cited in the NOV actually represented an improvement over the average pre-mining values (I Tr. 136-37). Perry admitted that the Final Report (Exh. R-17), contained only two "data points" in addition to those listed in the June 7 Report (Exh. A-22). He also acknowledged that the conclusion set out in OSM's June 7 report was that OSM was "unable to substantiate a finding" of adverse impacts to water quality resulting from Roblee's mining (III Tr. 92), and that "slight increases in iron and sulfate during the post-mining period could be attributable to seasonal fluctuations" (III Tr. 59).

Berthy, the OSM inspector who issued the April 13, 1990, NOV, stated that his basis for issuing that NOV was his conclusion that when Roblee mined outside the boundaries shown on its subsidence control plan map it had affected the water discharged at Discharge A. He maintained that the difference between the samples taken at Discharge A before and after mining indicated that Roblee was responsible for the degradation (I Tr. 47-48), but admitted that Sturm Services' study indicated that the poor quality of the water coming from Discharge A was caused by things other than Roblee's mining operations (I Tr. 50). He also admitted that the approved permit allowed Roblee to intersect the old Berryburg Mine workings (I Tr. 46).

When discussing the acidity of the discharge, Felbinger acknowledged that if the water was coming into the mine due to subsidence, the basic content of the overlying rock would cause discharged water to have a lower acid content (higher pH) than it would if no water was percolating through the subsided overburden (II Tr. 32). Felbinger testified that fractured

overburden would allow infiltrating water to carry alkaline as well as acidic materials from overlying strata, but that no chemical analysis of roof rock was undertaken (II Tr. 32-33).

OSM witness Sheets testified that the values cited in the NOV (pH of 5.50 and total iron of 72.6 mg/l) represented a degradation of the water quality from the baseline value. For OSM to prevail, this fact must be demonstrated. On two occasions OSM Inspector Berthy referred to the Sturm Services study (Exh. A-16, Table 3) as evidence that post-mining quality of Discharge A was worse than the pre-mining quality (I Tr. 23, 47). However, the Sturm Services study gives a range of pH value from 3.0 to 4.9 for samples taken at Discharge A during the pre-mining years 1984 and 1985. The analysis of the April 11, 1990, sample used by Berthy to support his conclusion shows a pH of 5.28. Sturm Services' post-mining samples, taken in the first 3 months of 1990 indicate a pH ranging from 4.9 to 5.2 (Exh. A Table 3). Perry was correct when he testified that the values cited in the NOV represented improvements over both pre-mining pH and total iron values. The pH values in the Sturm Services studies certainly indicate an improvement toward the neutral pH of 7 for post-mining values.

Judge Torbett's finding that OSM did not present a prima facie case is well reasoned and supported by the record, and OSM has not carried its burden of demonstrating that his finding was erroneous.

Merits

[4] Judge Torbett also found that Roblee's evidence had overcome any case OSM may have presented. On appeal OSM argues that it presented a prima facie case and Roblee failed to prove that its mining activity did not adversely impact Discharge A (Brief at 20). The OSM characterization of the burden of proof placed on Roblee is not correct. Roblee is not required to prove that its mining activity did not adversely impact the Discharge A effluent. It need only present sufficient evidence to overcome OSM's case, and it need do no more. United States v. Springer 491 F.2d 239, 242 (9th Cir.), cert. denied, 419 U.S. 834 (1974); Foster v. Seaton, 271 F.2d 836, 838 (D.C. Cir. 1959); United States v. Mavros, 122 IBLA 297, 302 (1992); United States v. Page, 119 IBLA 12, 21 (1991). In doing so, it need only prove, by the preponderance of the evidence, either that the violation cited in the NOV did not occur, or that the violation was not caused by its operations.

Thus, if I were to have found that OSM presented a prima facie case, the evidence presented by Roblee would be weighed against that presented by OSM. To support reversal, the preponderance of the evidence must support a finding that Roblee's mining activity had materially damaged the hydrological balance resulting in discharge of water flowing from Discharge A in violation of State and Federal water quality laws and effluent limitations. Keeping this in mind I will briefly consider that evidence presented by Roblee.

(1) The Tunnel serves as a "clean" reference point for Discharge A

Donald Streib, who qualified as an expert in statistical analysis, (III Tr. 21), was highly critical of OSM's regression analysis and conclusions based on that analysis. Streib stated his opinion that OSM's statistical regression and correlation analysis, using the Tunnel flow as baseline reference point was meaningless. This conclusion was not inconsistent with OSM witness Felbinger's statement that the regression analysis could not be used to predict the Discharge A flow for phase 2; it showed only "that there wasn't any relationship--there was a change in relationship" (II Tr. 74).

Moore, DOE surface mine reclamation inspector, testified that he received periodic complaints about Stewart Run effluent and had tested the water's pH and iron content (II Tr. 102-03). According to Moore, the water coming from Discharge A was "pretty bad" before Roblee started mining (II Tr. 103), and that its quality and volume varied seasonally, based on weather conditions (II Tr. 112, 116).

Gary Hilgar, hydrogeologist for Sturm Services, testified that Sturm Services' conclusions were based on observations of empirical data rather than being based upon a mathematical correlation. When asked to explain why the flow relationship between the Tunnel discharge and Discharge A appeared to change after September 1989, Hilgar testified that when the Tunnel flow exceeded the Discharge A flow, the discharge was influenced by heavy precipitation. He stated that, while one would expect both discharge points to respond consistently to changes in precipitation, the lack of consistency is attributable to changes in surface flows resulting from precipitation. It was his opinion that it was impossible to establish a baseline relationship between the two discharge points because their relationship was in a dynamic state of flux (III Tr. 17-19).

(2) A groundwater divide prevented water from flowing between the old Berryburg workings and Discharge A

Referring to Exhibit A-23 (Consolidation No. 37 Mine map), Streib noted that the contour lines for the floor of the Pittsburgh seam were constant, sweeping to the east, and did not indicate the presence of a groundwater divide (III Tr. 28). It was Hilgar's opinion that all of the water collecting in the old Consolidation workings (hundreds of acres) could drain to Discharge A (II Tr. 210, 212), and that only about 30 acres of Roblee's Mine No. 2 would contribute to that flow.

(3) The quantity of water discharge at Discharge A increased by 100 gpm as a result of groundwater flowing from Mine No. 2

A majority of Roblee's witnesses had been in Mine No. 2 during its operations and testified that Mine No. 2 was drier than most mines, and that there was no ponding or pooling of water in that mine. John Sturm, president of Sturm Services, testified on behalf of Roblee. It was Sturm's opinion there was not enough water in Mine No. 2 to create the conditions at

Discharge A cited in OSM's NOV, and he stated his belief that the changes in water quantity and quality observed by OSM were caused by the drought-flood cycle of 1988 and 1989 (II Tr. 181-83, 187).

Hilgar described the direction of water flow in the Berryburg and Mine No. 2 mines. Hilgar testified that the primary factors influencing the hydrology of the Mine No. 2 were precipitation, stratigraphic dip, the presence of open mine voids, the presence of barriers and seals (including coal barriers) and the Berryburg slurry trench (II Tr. 208). He stated that only the water originating in the northerly and easterly portions of Mine No. 2 would flow toward Discharge A (II Tr. 201-02). He estimated that, in all likelihood, Mine No. 2 area would contribute two tenths of a gallon per minute per acre (II Tr. 213-14) to Discharge A, based on steep slopes, heavy vegetation cover, and overburden with low permeability (III Tr. 8). Based upon the physical evidence, Hilgar estimated that Mine No. 2 contributed approximately 6 gpm to Discharge A, which flows at 140 to 150 gpm on the average. It was Hilgar's opinion that Roblee's mining operation had no material impact on Discharge A (II Tr. 214).

(4) Water was impounded in Mine No. 2 and discharged in large volumes during the 1989 high water period

Roblee's President, Robert Jeran, characterized Mine No. 2 as a "dry" mine, and stated that no ponding or pooling of any volume of water had been encountered during mining operations (II Tr. 125-26). He testified that the only flowing water Roblee encountered was in the old workings when they were intersected near the center of Mine No. 2. He described placing 16-inch blocks, mortar seals, bridging, and piping at that location to permanently seal the water from the Berryburg Mine away from Mine No. 2 (II Tr. 122).

Henderson, a DOE employee, testified that he inspected Mine No. 2 at least once every 3 months between 1987 and 1989. Henderson identified where Roblee mined into the old Berryburg workings and encountered a "sizable" amount of water flowing through the old openings (Exh. A-9, Final Map of Mine No. 2). He stated that Roblee installed pipes in the mine floor at that point and "built a bridge across it so the water flowed down dip direction" (II Tr. 97-98). He testified that other parts of Mine No. 2 were drier than most mines and that he knew of no occasions when Roblee cut into water impoundments (I Tr. 98-99).

Joe Jeran was employed by Roblee to take water samples and compile water data (II Tr. 137). According to his records (Exhs. A-1 and A-2), the water quality at Roblee's Gall Hollow discharge point was always within compliance levels without treatment (II Tr. 138-41). He testified that Mine No. 2 was so dry that all but two miners opted to wear leather boots while working in the mine (II Tr. 151-52).

Sturm testified as an expert on acid mine drainage. He stated that Sturm Services was hired by Roblee in April 1989 to evaluate Discharge A (II Tr. 159, 163). He stated the primary reason for acid mine water discharge

from the Berryburg Mine was that the Pittsburgh coal seam was highly acidic, and only 40 percent of the coal was removed by room and pillar mining operations, leaving 60 percent of the acid producing coal in place (II Tr. 169-73). It was his opinion that Roblee took all steps necessary to minimize the migration of water and minimize adverse impacts to the hydrologic balance, including barrier and seal installation (II Tr. 175-76). Sturm stated that his company's data (Exhs. A-15 and A-16) demonstrated that Roblee's mining operations had no negative influence on Discharge A, and the quality of the discharge at that point was better after Roblee left than when it began mining (II Tr. 176). 11/

It was Sturm's opinion there was not enough water in Mine No. 2 to create the conditions at Discharge A cited in OSM's NOV, and he stated that the changes in water quantity and quality observed by OSM were caused by the drought-flood cycle of 1988 and 1989 (II Tr. 181-83, 187). Sturm also described a 2,670-foot-long slurry trench King Knob had built to impound and restrict acid water seeping from the old Berryburg Mine (II Tr. 168-69).

(5) An analysis represented by eight sample points was sufficient to establish a relationship between the two discharges and deviations in Discharge A flow

Streib, Roblee's expert in statistical analysis, did comparative statistical analysis and concluded that the comparisons made by OSM were meaningless (III Tr. 42). He considered OSM's predictions regarding the rate of flow from Discharge A as playing numbers games, stating that OSM's use of statistical analysis was inappropriate and their findings were invalid (III Tr. 45). He also noted that there was not a sufficient number of samples to do the comparative analysis OSM used as the basis for its conclusions (III Tr. 47).

Streib stated that the post-mining flow at Discharge A was not worse than the pre-mining flow (III Tr. 35), and that there was nothing in Roblee's operations that could have triggered the results suggested in OSM's Final Report (Exh. R-17). It was also Streib's opinion that Roblee's operations at the No. 2 Mine improved the water quality at Discharge A (III Tr. 46). On cross-examination, Streib stated that post-mining increases in iron sulfates was attributable to seasonal fluctuations (III Tr. 59).

Judge Torbett noted Perry's acknowledgement that more sampling would have been required to arrive at a valid analysis of both discharges. Specifically citing testimony by Hilgar and Streib, he found the weight of the evidence was that no relationship between the two points could be established. He also found Roblee's position that the drought/flood cycle of 1987-89 caused acidic substances to be formed during dry periods and flushed from the old Berryburg Mine works during wet periods to be "persuasive" (Decision at 26). He specifically noted that Roblee's explanation

11/ The Sturm report also noted that nearly 1,000 tons of alkaline rock dust had been placed in the No. 2 Mine to prevent coal dust accumulation.

took "the uncertainty associated with exact cause and effect scenarios within an underground mine of over 1000 acres" into account, and stated that because of the mingling of waters "no particular cause-effect water pattern could be attributed to the Roblee works" (Decision at 26).

The weight of the evidence clearly supports a conclusion that Roblee's mining activity did not cause material damage to the hydrological balance and that Roblee's mining activity had not adversely affected the quality or quantity of the groundwater flowing from Discharge A. OSM has failed to prove that Judge Torbett erred when he vacated NOV 90-11-013-01 and CO 90-11-013-02. Review of the record and transcript has made it very apparent that Judge Torbett thoroughly reviewed the record and testimony of all of the witnesses before reaching his conclusions. He carefully weighed the evidence, and my independent review of the record leaves little doubt that his factual determinations are amply supported.

Without further belaboring this decision with additional references to and discussion of OSM's contentions regarding errors of fact and law, except to the extent they have been expressly or impliedly addressed in this decision, they are rejected on the ground that they are, in whole or in part, contrary to the facts and law or are immaterial. National Labor Relations Board v. Sharples Chemicals, Inc., 209 F.2d 645, 652 (6th Cir. 1954).

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed.

R. W. Mullen
Administrative Judge
130 IBLA 288

ADMINISTRATIVE JUDGE IRWIN CONCURRING IN THE RESULT:

In my view, the Office of Surface Mining Reclamation and Enforcement (OSM) presented a prima facie case that Roblee's mining operations disturbed the hydrologic balance of Stewart's Run by degrading the quality of the effluent from Discharge A.

The regulation states that OSM shall have the burden of going forward to establish a prima facie case "as to the fact of the violation." One who petitions for review of a civil penalty "shall have the ultimate burden of persuasion as to the fact of the violation." 43 CFR 4.1155. The analogous regulation applicable to proceedings to review notices of violation (NOV) or cessation orders is to the same effect: OSM "shall have the burden of going forward to establish a prima facie case as to the validity of the notice [of violation], order [of cessation], or [the] modification, vacation, or termination thereof." 43 CFR 4.1171(a); see 52 FR 38246-47 (Oct. 15, 1987). The ultimate burden of persuasion "shall rest with the applicant for review." 43 CFR 4.1171(b).

A prima facie case

is made when sufficient evidence is presented to establish the essential facts. It is evidence that will justify but not compel a finding in favor of the one presenting it, unless it is contradicted and overcome by other evidence. How much evidence is required may, of course, vary with the nature of the case and with the relative availability of the evidence to the person charged with the burden of establishing the prima facie case.

Rhonda Coal Co., 4 IBSMA 124, 131-32, 89 I.D. 460, 464 (1982).

In this case, OSM offered sufficient evidence to justify concluding that Roblee's re-mining of a portion of the old Consolidation No. 37 underground mine caused a deterioration of water quality offsite. The crux of OSM's case was the evidence that concentrations of total iron and sulfate in the effluent from Discharge A were higher after Roblee completed mining than before. The average concentration of total iron in seven samples taken before mining, from December 1984 - June 1985, was 87.7 mg/l. For sulfates it was 1,276 mg/l. (Exh. R-17, Table 1; Exh. A-15, Table 3). After mining, the average of 20 samples taken from May 1989 - June 1990 was 287 mg/l. total iron; for sulfates it was 2,150 mg/l. (Exh. R-17, at 8 and Table 1). If only the samples for October 1989 - June 1990, i.e., after the period of heavy precipitation, are considered, the average for total iron is 193 mg/l. and for sulfates is 2,380 mg/l., still well above the pre-mining levels (Exh. R-17, Table 4). OSM found these post-mining levels of iron and sulfate significantly above the pre-mining levels and attributed them to a new source of acid drainage from Discharge A, i.e., drainage from Roblee's No. 2 Mine as a result of increased infiltration into the mine due to roof fracturing after retreat mining, that is, mining that removes up to 80 percent of the supporting coal (I Tr. 110-11, 122-23, 125-28).

Contrary to the statement at the conclusion of Judge Torbett's decision, the fact that the levels for total iron and pH (but not sulfate) cited in the NOV were lower than the pre-mining averages does not alone contradict the fact of a violation. As Roblee's witness Streib observed, it takes more than one sample to establish a stable level of quality (III Tr. 32, 35).

Although Roblee challenged OSM's evidence on cross-examination, it did not destroy OSM's prima facie case. Roblee did, however, successfully contradict and overcome OSM's evidence with other evidence. The evidence of Roblee witnesses Sturm, Hilgar, and Streib that the changes in the effluent from Discharge A were caused by area-wide weather phenomena (drought followed by heavy rains) whose effects were observed at several other mines, and that it was premature to regard the effects of those phenomena (flushing of acid-forming materials that built up in the old mine during the drought) as having stabilized at levels above those before mining, effectively contradicted OSM's evidence. After weighing the conflicting evidence, I agree the NOV should be vacated and the civil penalty refunded.

As both parties acknowledged, it is not possible to be certain why the quality and quantity of the Discharge A effluent changed. Especially in a case of this nature, where causation cannot be established by visible or tangible evidence, OSM's hypothesis was reasonable and its supporting evidence adequate to constitute a prima facie case that Roblee's mining operation was the cause.

Will A. Irwin
Administrative Judge