FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION
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November 26, 1998

SECRETARY OF LABOR,	:	CIVIL PENALTY PROCEEDING
MINE SAFETY AND HEALTH	:	
ADMINISTRATION (MSHA),	:	Docket No. WEST 98-290
Petitioner	:	A.C. No. 42-02095-03517
	:	
v.	:	
	:	Bear Canyon #2
C.W. MINING COMPANY,	:	
Respondent	:	

DECISION

Appearances: Ann M. Noble, Esq., Office of the Solicitor,
U.S. Department of Labor, Denver, Colorado,
for Petitioner;
Carl E. Kingston, Esq., Salt Lake City, Utah,
for Respondent.

Before: Judge Cetti

This case is before me upon a petition for assessment of civil penalties under sections 105(d) and 110 of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 801 *et seq*., the "Mine Act." The Secretary of Labor, on behalf of the Mine Safety and Health Administration, (MSHA), charges C.W. Mining Company (C.W.) with the violation of the mandatory safety standard 30 C.F.R. § 75.220(a)(1) which requires each operator to develop and follow a roof control plan approved by the MSHA District Manager. The Respondent asserts that there was no violation of their approved roof control plan and presented evidence that it developed a roof control plan that was approved by the MSHA district manager, that it followed that plan at all relevant times and furthermore, the alleged violation was not related to the fatal accident of August 24, 1997. That accident gave rise to an MSHA investigation. Twenty-one days thereafter Inspector Jerry O.D. Lemon issued the citation charging C.W. with a violation of its roof-control plan.

THE ACCIDENT

The fatal accident of August 24, 1997, at the Bear Canyon No. 2 mine was the direct result of a slip and fall under or in front of the path of a moving Joy shuttle car. The victim was a 45-year old continuous mining machine helper who was attempting to move quickly past the

moving shuttle car. As a result of the slip and fall in the path of the moving shuttle car he was run over, sustaining fatal crushing injuries.

STIPULATIONS

1. Bear Canyon No. 2 is an underground coal mine located nine miles northwest of Huntington, Emery County, Utah, and its mining operations affect interstate commerce.

2. The mine is owned and operated by C.W. (Co-op Mine), MSHA I.D. No. 42-2095.

3. Bear Canyon No. 2 mine is subject to the jurisdiction of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 801 *et seq*. ("the Act").

4. The Administrative Law Judge has jurisdiction in this matter.

5. The subject 104(d)(1) Order No. 4890930 was properly served by a duly authorized representative of the Secretary upon an agent of respondent on the date and place stated therein, and may be admitted into evidence for the purpose of establishing its issuance, and not for the truthfulness or relevancy of any statements asserted therein.

6. The exhibits to be offered by Respondent and the Secretary are stipulated to be authentic but no stipulation is made as to their relevance or the truth of the matters asserted therein.

7. The operator demonstrated good faith in abating the violation.

8. C.W. Mining Co. is a coal mine operator with 570,060 production tons or hours worked in 1997.

ISSUES

The primary issues are whether or not C.W. violated its roof-control plan as alleged in Citation/Order Number 4890930 and, if it did, should the S&S and unwarrantable failure designations be upheld and the appropriate penalty to be assessed considering the criteria in § 110(i) of the Mine Act.

FINDINGS AND CONCLUSIONS

Having considered the hearing evidence and the record as a whole, I find that a preponderance of the substantial, reliable and probative evidence establishes the Findings of Facts, Conclusions and Further Findings in the Discussion below:

1. Bear Canyon #2 is an underground coal mine, located in Emery County, Utah, and is owned and operated by C.W. (Co-op Mine). The operator is engaged in the mining of underground coal in the Bear Canyon Mine.

2. The mine has one active development and one active retreat pillar working sections, both of which use remote-controlled Joy 14CM15 continuous mining machines, Joy shuttle cars, Lee Norse TD-142 single-boom roof-bolting machines, and a Fletcher DDR-13-B-CW double-boom roof-bolting machine to install supplemental supports. In the area of the accident, main entries had been previously developed and room and pillar retreat mining methods were being utilized.

3. The mine employs 44 underground miners and 27 surface employees, and has a daily production of approximately 982 tons of coal. The mine works two nine hour production shifts and one nine hour overlapping maintenance shift each day, seven days per week.

4. On August 24, 1997, at the Bear Canyon No. 2 mine, a miner, employed by C.W. sustained fatal injuries when he fell under or in front of the path of a moving shuttle car.

5. The roof-control plan at the time of the accident shows by diagram the typical pillar extraction sequence in which two adjacent pillars are split vertically in tandem with the splits parallel to each other. The plan expressly provides in writing that stress conditions may require temporary "variations from sequence shown" in the diagrams.

6. The Order/Citation No. 4890930 charges C.W. with violating its roof-control plan in two specific respects (1) it split Pillar No. 6 perpendicular to Pillar No. 5 and (2) it split Pillar No. 6 all the way through before Pillar No. 5 was fully mined.

7. The roof-control plan does not define the gob area and does not use or even mention the term "gob."

8. The 2A cut of Pillar No. 6 that split Pillar No. 6 all the way through was made to relieve the stress that was causing hazardous bouncing in the Pillar 5 and 6 area where the miners were working.

9. After splitting Pillar No. 6 all the way through to relieve the stress causing the hazardous bouncing, the crew made cuts 3, 4, 5, 6 and 7 in Pillar No. 5 in the proper sequence called for in the approved roof-control plan.

10. The August 24, 1997, cave of the roof in fully mined-out area consisting of what was Pillars No. 3, 4 and the left half of Pillar No. 5 was not a premature cave. It was a planned, hoped-for, anticipated cave that went no further on the 24th of August than planned. The roof did not cave in the split off right half of Pillar No. 5 where Cyril Jackson, the operator of the remote-controlled miner, and his helper Samuel Jenkins were working.

11. The preponderance of the evidence presented fails to establish that in making cuts 6 and 7 in Pillar No. 5, the miners entered the gob or that they violated any provision in the mine's approved roof-control plan.

DISCUSSION AND FURTHER FINDINGS

C.W.'s roof-control plan at the relevant time (Pet.'s Ex. 4) shows the typical pillar extraction sequence. This typical extraction sequence is not spelled out in words but appears in the diagram sequence shown on page 16 of Petitioner's Ex. 4. It shows two adjacent pillars with splits parallel to each other. In addition, however, the plan specifically spells out in words that "stress conditions may require temporary variations from the sequence shown." (Emphasis added). (Tr. 127-128).

C.W. presented credible evidence that it split Pillar No. 6 perpendicular to the split in Pillar No. 5 because of certain geologic features in the roof of the No. 6 entry which extended into Pillar No. 6, that would subject the miners who would be working in the split to the hazard of being injured by the falling of the immediate roof if they split Pillar No. 6 parallel to the split in Pillar No. 5. There was no contrary evidence.

Before Pillar No. 6 was split, it was examined by C.W. personnel to determine the safest way to split Pillar No. 6. They observed roof fractures in the roof of entry No. 6 which continued through to Pillar No. 6. These roof fractures were nearly parallel to the split in Pillar No. 5. C.W. personnel knew from past experience in the mine that if the pillar is split in the same direction as the roof fractures, the immediate roof above the split between the fractures becomes unstable and falls out. Thus it creates a hazard of the immediate roof falling and injuring the miners working below within the split, even though the roof is properly bolted. (Tr. 278, 488). Consequently to avoid this danger to the miners working in the split, C.W. split Pillar No. 6 perpendicular to the roof fracture lines and thus perpendicular to the split in Pillar No. 5. They believed they were splitting Pillar No. 6 in the safest way for the safety of the miners and were following the requirements of the roof-control plan and the provision of § 75.220(a)(1) which requires additional measures if unusual hazards are encountered.

In the citation, Inspector Jerry O.D. Lemon charges C.W. with violating its roof-control plan in two specific respects: (1) it split Pillar No. 6 perpendicular to the split in Pillar No. 5 and (2) it split Pillar No. 6 all the way through before Pillar No. 5 was fully mined. C.W. concedes that it did (1) and (2) but assert that did not constitute a violation of its roof-control plan under the facts and circumstances of this case.

C.W. presented credible evidence that if Pillar No. 6 were split parallel to the roof fractures that were observed going into Pillar No. 6, the coal underneath that was supporting the fractured coal would be removed. C.W. personnel, from past experience, knew this removal of support under the fractured area would create a hazardous condition that would allow the immediate roof above the split between the fractures to fall out on the miners who would be working below on the floor of the split.

Inspector Lemon who issued the citation testified that, because of the hazardous bounce problem C.W. was having, the 2A cut that split Pillar No. 6 all the way through was not a violation of the plan. That cut through Pillar No. 6 relieved the stress that was causing the bouncing, but after splitting Pillar No. 6 all the way through the miners should not have gone into the area where the 6 and 7 cuts of Pillar No. 5 were made because cutting all the way through Pillar No. 6 made those cuts part of the gob. Respondent's witness vigorously denied that cutting through Pillar No. 6 made the 6 and 7 cut area of Pillar No. 5 part of the gob and presented credible evidence to that effect.

After Pillar No. 6 was split all the way through perpendicular to the split in Pillar No. 5, the remote-control miner was used to make cuts 3, 4, 5, 6 and 7 in Pillar No. 5 in the sequence called for by the approved roof-control plan.

I credit the testimony of Cyril Jackson, first called as a witness by the Secretary and later by Respondent. He was the operator of the miner (machine) on the afternoon shift of August 24, 1997, and had just completed cuts No. 6 and 7 in the right half of Pillar No. 5. As he started to back the miner out of cut No. 7 in the right half of Pillar No. 5, the planned and hoped-for cave of the roof in the gob area (that at that time consisted of the mined out Pillar No. 3, No. 4 and the split-off left half of Pillar No. 5 that was adjacent to Pillar No. 4 area) began to cave. Messrs. Jackson and Jenkins knew the anticipated cave was occurring because they felt the blast of air caused by the caving roof pushing the air out of the gob space as the roof in the mined out Pillars No. 3, 4 and left half of 5 caved. Mr. Jackson testified that there was nothing unusual about the cave; that it did not cave prematurely; that it caved just where they planned, hoped and expected it would cave. It did not cave in the area where he and Samuel Jenkins were working. The split-off right half of Pillar No. 5 did not cave at all. (Tr. 410).

Mr. Jackson testified he and Mr. Jenkins ran outby when they felt the blast of air caused by the cave-in because that was the prudent thing to do. All miners in the pillar section exit outby quickly when the planned, anticipated, hoped-for cave occurs because of the remote possibility that any cave may go farther than planned or anticipated.[1] If Messrs. Jackson and Jenkins just stayed where they were when they first felt the air blast from the hoped-for cave they would not have been hurt and, of course, the fatal accident would not have occurred.

[1] Witness called by the Secretary, as well as Respondent, testified that when any planned, anticipated cave occurs, all miners in the pillar section run outby as it is the prudent thing to do. Bruce Andrews, the MSHA coal mine inspector, who was one of the two persons selected by MSHA to make the investigation of the accident and to write the accident report, testified it is typical among all miners in the pillar section to run when they feel that air blast that tells them the planned cave is occurring. He testified they run outby using the fastest, safest exit route. Its the prudent thing to do because of the possibility of any cave going farther than planned or expected.

At the hearing Jerry O.D. Lemon, the inspector who made the investigation, wrote and issued the citation, acknowledged that C.W. did not violate its roof plan in splitting Pillar No. 6 perpendicular to the split in Pillar No. 5 nor in splitting Pillar No. 6 all the way through before Pillar No. 5 was fully mined. Inspector Lemon testified that the violation consisted of the miners' going into the area of cut 6 and 7 of Pillar No. 5 after splitting Pillar No. 6 all the way through. This was based upon Mr. Lemon's belief that splitting Pillar No. 6 all the way through perpendicular to the split in Pillar No. 5 made the area at cuts 6 and 7 of Pillar No. 5 a part of the gob. Inspector Bruce Andrews testified to the same effect, namely, that the violation in this case consisted of making cuts 6 and 7 of Pillar No. 5 after splitting Pillar No. 6 all the way through. (Tr. 76).

In addition to the testimony of Cyril Jackson, I credit the testimony of Kenneth H. Defa, the mine superintendent, and Charles Reynolds, the mining engineer.

Kenneth H. Defa, mine superintendent for C.W. has worked underground in the mine for 30 years and has held about every position in the mine. He has been involved in making decisions as to which way to pull a pillar for 20 years. He has pulled thousands of pillars and has been "real successful" in pulling pillars without an accident. Other mine operators have sent their personnel over to observe how he pulls pillars in the Bear Canyon mine. He has participated in developing the roof-control plans that were in effect during the time that he was pulling pillars at Co-op Mine and for C.W.

Mr. Defa testified that he had a discussion with Lee Smith who was in charge of roof control in the Denver office in 1989. At that time the mine's roof-control plan depicted step by step, several different ways pillars could be pulled. This made the plans fairly bulky, cumbersome and hard to follow. At the time of their discussion Lee Smith told him "people know that when you're pulling pillars, things are going to change from pillar to pillar, from day to day and that all that stuff was not necessary. And, he asked that we condense the plans down as small as we could possibly make it, and still understand what the methods were."

Mr. Defa did not believe that any of the modifications of the roof plan after 1989, which the mine developed and the District Manager approved, prohibited him from making the split in adjacent pillars perpendicular to each other when faced with geologic conditions that make it hazardous to split a pillar parallel to the split in the adjacent pillar. Mr. Defa continued to do this when he believed he was required to do so for the safety of the miners. There was no indication from anyone to him that the plan, even under the latest modification of April 1997, did not permit him to do so. A number of the inspectors have observed him pulling pillars in the sequence and procedures the mine used in pulling Pillars No. 5 and 6 in August 1997, and none have ever indicated to him he shouldn't or couldn't do so, under any of the amendments that have been made to the mine's roof control plan. Mr. Defa is of the opinion that splitting Pillar No. 6 perpendicular to the split in Pillar No. 5 does not make the area of cuts 6 and 7 of the No. 5 pillar part of the gob. In all his many years of underground mining experience, he has never

heard the gob described by anyone in a way that would, under the circumstances we have in this case, make the area of the cuts 6 and 7 of Pillar No. 5 part of the gob.[2]

Mr. Defa testified that the cave of the gob area on August 24, 1997, did not travel any further than planned, expected or anticipated.

Mr. Jackson testified that when he and Mr. Jenkins felt the blast of the wind from the hoped-for cave of the gob area and started exiting outby, no material had fallen in the area of the right half of Pillar No. 5 and, in particular, no material had fallen on the miner. (Tr. 407). He was positive it was not going to cave on the right half of Pillar No. 5 because neither the timbers in the split of No. 6 pillar nor the turn row timber which they had set up was taking any weight. Also the double turn-row timbers in Entry 6 and crosscut 16 were not taking weight. It did not "cave anywhere differently" than where he 'hoped' it would cave. There was no cave in the right half of Pillar No. 5 at all.

Mr. Jackson testified that about 40 minutes after the fatal accident, he again entered the right half of Pillar No. 5 where he and Mr. Jenkins had been working "to see if anything changed." The only change he noticed was that a little bit of rock had rolled out of the gob by the miner and a little bit on the cutter head drum. The roof had not caved at all where he took cuts No.6 and 7 from Pillar No. 5. The next morning he went to that area again and noticed some rock that had fallen on the miner since he last saw the miner the day before. Credible evidence was presented that it was not unusual for a period of time up to 16 to 24 hours after a cave for there to be changes such as additional top rock falling without any new mining being done. This is due to the fact that previous mining activity continues to work on the pillar after a cave. None of the mine inspectors who testified saw the area in question until the day after the planned cave of the gob area (consisting of what was Pillars No. 3, 4 and left half of Pillar No. 5) occurred.

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[2] *See* American Geological Institute, *Dictionary of Mining, Mineral, and Related Terms* 239 (2d ed. 1997) defining gob as follows:

> gob (a) A common term for goaf. (Fay, 1920) (b) To leave coal and other minerals that are not marketable in the mine. (Fay, 1920) (c) To stow or pack any useless underground roadway with rubbish. (Fay, 1920) (d) To store underground, as along one side of a working place, the rock and refuse encountered in mining. (Hudson, 1932) (e) The space left by the extraction of a coal seam into which waste is packed or the immediate roof caves. (CTD, 1958) (f) A pile of loose waste in a mine, or backfill waste packed in slopes to support the roof. (Ballard, 1955) (g) Coal refuse left on the mine floor. (Kerson, 1938) (h) The material so packed or stored underground. (Hudson, 1932) (i) To fill with goaf or gob; to choke, as a furnace as gobbed or gobs up. See also *gobbing.* (Webster 2nd, 1960)

Charles Reynolds has been the mining engineer and environmental coordinator for C.W. since 1995. He graduated from the University of Utah College of Mines and Earth Sciences in 1991 with a bachelor's degree in mining engineering and has a professional engineer license from the State of Utah since 1987. He worked from 1991 to 1995 for Magnum Engineering Consultants as a mining engineer. (Tr. 473-475). He did consulting work for the Bear Canyon and other mines including roof design and control and is an active member of the Utah Mining Association of Engineers and has taken a course at NIOSH on roof-control analysis and roof stability. He has become competent in the use of three computer modeling programs which help evaluate pillar stability and roof control. He has customized the program to the Bear Canyon Mine. He has taken a course given by NIOSH on roof-control analysis and stability. He also took a course on bleeder and gob evaluation.

Mr. Reynolds is familiar with the roof-control plan in effect at the time of the August 1997 accident. He helped "in putting" that plan together. He testified that if Pillar No. 6 had been split parallel to the split in Pillar No. 5, "You would be taking a chance of having some immediate roof, the top two to four feet, fall out in the area where the men would be working." (Tr. 489). In his opinion, splitting Pillar No. 6 perpendicular to the split in Pillar No. 5 has no effect on inducing the cave in the mined-out area of Pillars No. 3, 4 and the left half of 5.

Mr. Reynolds testified that splitting Pillar No. 6 all the way through, perpendicular to the previous split in Pillar No. 5 and then mining the left half of Pillar No. 5 did not change the gob line. It did not extend the gob line into the right half of Pillar No. 5. Never in his experience, education or training has he ever heard of the gob defined in a way that under the facts of this case make cuts 6 and 7 in the right half of Pillar No. 5 a part of the gob.

Mr. Reynolds helped the inspectors with the investigation of the accident and he never heard any of them say there was anything wrong with taking cuts no. 6 and 7 from Pillar No. 5 after splitting Pillar No. 6 all the way through. At the end of his direct examination the last question and the answer given by Mr. Reynolds was as follows:

> Q. In your opinion, having helped to author the roof control plan and being familiar with the conditions that were there at the time, did splitting Number 6 through and then mining the right half of Pillar Number 5 violate the provisions of the roof control plan?
>
> A. No, it didn't.

CONCLUSION

The parties presented conflicting evidence as to what was the best and safest mining practice and procedure when a pillar adjacent to a pillar split vertically, must, for valid safety reasons, be split perpendicular to the split in that adjacent pillar. It is not for me to decide in this case what is the best or safest mining procedure to be following under the facts of this case. I only find and conclude that on the basis of the evidence presented in this case that a preponderance of the evidence of record fails to establish that Respondent violated its roof-control plan on August 24, 1997, as charged in Citation No. 4890930. The citation is **VACATED** and this proceeding is **DISMISSED**.

August F. Cetti
Administrative Law Judge

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