CCASE: COPPER RANGE v. SOL (MSHA) DDATE: 19810114 TTEXT: Federal Mine Safety and Health Review Commission Office of Administrative Law Judges

WHITE PINE COPPER DIVISION,	Contest of Order
COPPER RANGE COMPANY,	
APPLICANT	Docket No. LAKE 80-236-RM
v.	
	Order No. 298441
SECRETARY OF LABOR,	February 19, 1980, as modified
MINE SAFETY AND HEALTH	
ADMINISTRATION (MSHA),	White Pine Mine
RESPONDENT	

#### DECISION

Appearances: Ronald E. Greenlee, Esq., Clancey, Hansen, Chilman, Graybill & Greenlee, P.C., for Applicant Gerald A. Hudson, Esq., Office of the Solicitor, U.S. Department of Labor, Detroit, Michigan, for Respondent Harry Tuggle, Safety Director, for the United Steelworkers of America

Before: Judge Edwin S. Bernstein

### STATEMENT OF THE CASE

This is a proceeding filed under Section 107(e) of the Federal Mine Safety and Health Act of 1977 (the Act) by White Pine Copper Division, Copper Range Company (White Pine or Applicant), to review an order of withdrawal issued by an inspector of the Mine Safety and Health Administration (MSHA or Respondent). The order was issued under Section 107(a) of the Act for an alleged imminent danger at the White Pine Mine. I conducted a hearing on October 28, 29, and 30, 1980, in Ironwood, Michigan. Bruce Haataja, the MSHA inspector who issued the withdrawal order, William Carlson, an MSHA mining engineer, and William W. Lutzens testified for MSHA; Al Goodreau, Brian McGunegle, Joe Maher, Wally Olkkonen, and William Dorvinen testified for White Pine; and John Cestkowski and Dale Sain testified for the United Steelworkers of America (the Union or Steelworkers).

The issue before me is whether or not Withdrawal Order No. 298441, dated February 19, 1980, and its modifications, dated February 22, 1980, and February 25, 1980, were proper. (FN.1)

## FINDINGS OF FACT

At the hearing, the parties stipulated, and I find:

1. White Pine Mine is owned and operated by Applicant, White Pine Copper Division, Copper Range Company.

2. White Pine is subject to the jurisdiction of the Federal Mine Safety and Health Act of 1977.

3. I have jurisdiction over this proceeding.

4. The subject order and modifications were properly served upon Applicant by a duly authorized representative of the Secretary of Labor. These documents may be admitted into evidence solely for purposes of establishing their issuance.

Applicant's witnesses testified about the background of the bolt removal program which resulted in the issuance of the order. (FN.2)

Brian McGunegle, White Pine's superintendent of technical services, has a bachelor's degree in mining engineering, and a master's degree in rock mechanics, as well as a good deal of experience in mining engineering at White Pine and elsewhere. He stated that the White Pine Mine had been in operation since the early 1950's, and that about 80 to 90 percent of the mined area had roof bolts. The roof, or back, of the area known as Unit 56 was sandstone which was relatively stable and strong. Early in 1980, the company decided to conduct a test involving the removal of roof bolts in one area of Unit 56. The purpose of the test was to determine if mining could be performed at White Pine without the use of roof bolts. He stated that the roof bolts in Unit 56 were four-foot bolts on four-foot centers. They had

been used "as a matter of habit," and were installed in this area in the latter half of 1979, when the area was mined. He stated that the area had an excellent back and that the operator expected little difficulty when the bolts were removed in the southern part of the test area. Farther north, however, where there was a roof fault, it was expected that some loose rock would fall.

The test began on February 5, 1980, when the first roof bolts were removed. The company decided to use two experienced foremen to do the actual bolt removal. The safeguards that were utilized included use of retreat mining, (FN.3) convergence data, (FN.4) borescope holes, (FN.5) warning lights and gauges, (FN.6) and roof sounding. (FN.7)

Mr. McGunegle stated that loose rock is not an unusual condition, and can be present regardless of whether bolts are in the roof. On cross-examination, he insisted that the area was basically stable, although there was loose rock near the faults. He stated that bolts can support some loose rock, but that beyond that, in a "massive competent" sandstone area such as this, they serve no function.

Mr. McGunegle stated that on February 7, 1980, two days after the test began, he went to the local MSHA office with Julio Thaler, the mine superintendent, and Albert Osenich, White Pine's safety director. The men briefed MSHA inspector William Carlson about the test which they had begun two days earlier. Mr. Carlson expressed concern that the test area was not representative of the general roof conditions in the mine, and that the miners would not accept the results of the test. Other than that, however, Mr. Carlson indicated no disapproval at the meeting.

Applicant's next witness was Joe Maher, White Pine's director of mine planning and engineering. Mr. Maher also has a degree in mining engineering. At the time of the test in Unit 56, he was in charge of ground control at White Pine. He gave testimony similar to Mr. McGunegle's concerning the taking of convergence data at various reference points via an extensometer. He agreed that this data monitors roof changes at 1/1000 of an inch increments. He explained that convergence data is gathered by a team of technicians and that graphs are compiled. He stated that there was always convergence going on to some degree, and that the amount of convergence varies throughout the mine. It is therefore important to look for departures from established trends, such as increases in the rate of convergence in a particular area.

Mr. Maher explained that a mechanical roof bolt performs the functions of suspending material from higher strata, keystoning, (FN.8) and inducing interbed friction within roof strata. He stated that the test site in Unit 56 had been selected because its structure was "massive sandstone [with] no bedding planes and shale," and the company felt it could get by with fewer bolts in this area. The men did not think the bolts were needed for the purposes of helping interbed friction or keystoning. Mr. Maher felt that the majority of roof bolts contributed nothing to the support of the roof, but that a small percentage contributed either by suspension or keystoning.

Mr. Maher stated that informal discussions were held in early or mid-January, 1980, concerning performing the test in this area. It was decided to use a Joy pneumatic roof bolter which had a canopy and which allowed the operator to work 10 to 12 feet from the end of the boom. Mr. Maher stated that signs were placed at all entries to the area. The signs read: "Restricted Area - Authorized Personnel Only." Mr. Maher selected two foremen to perform the test. He emphasized that they would be retreat mining and using warning lights, dial gauges, and roof sounding. They also periodically trimmed any loose roof. The men proceeded in a cautious manner, working slowly, keeping detailed records, and keeping track of any loose roof that came down.

Mr. Maher agreed with Mr. McGunegle that in the southern portion of the area, there was a massive roof with little or no loose. The men expected little trouble with the roof there. Upon removal of the roof bolts, there was no roof sag, and only a few small pieces of ground fell. He regularly visited the area, and was prepared to visit it daily if convergence data revealed a possible problem. Since convergence did not occur in the southern area, he visited it every other day.

In the northern part of the area, there was no convergence from February 5 until February 21, 1980. On February 21, there was a large roof fall. Mr. Maher stated that the reason for the fall was that the roof bolts

had been holding that large piece up. He stated that he visited the test area on March 13 with Mr. Carlson, and on April 1 with another MSHA inspector, Wally Lutzens.

Mr. Maher also stated that he had telephoned Mr. Lutzens on February 7 to inform him of the test and the procedures. Mr. Lutzens expressed concern about safety and recommended the use of temporary supports. Mr. Maher did not use temporary supports because he felt they would prevent him from measuring roof movements after the bolts were removed. Mr. Maher felt his method was safe, and temporary supports would create problems. He was particularly concerned that in removing such supports, the men would have to drag them out of the area and possibly dislodge other supports. He reiterated that based upon available convergence data he felt the roof was stable. However, he admitted that at the point where the large piece of rock fell, there was no indication in the convergence readings that the roof might come down. He stated that the fall was in the immediate roof and not in the main roof, and he repeated that there must be convergence before a fall. This was, in his words, a "physical law."

Wally Olkkonen testified that he was involved in the test from start to finish, operating the roof bolter, taking notes, and keeping records. He repeated the list of safety precautions which the crew utilized, including the use of light gauges, dial gauges, roof sounding, observation holes, and retreat mining. He stated that the operator of the roof bolter was always under bolted ground when manipulating the controls. He stood under the machine's three-foot-square canopy. The other man on the crew was behind the bolter under bolted roof, but not under a canopy. The machine's boom extended out 10 to 12 feet. Mr. Olkkonen added that the men were required to retrieve the removed bolts, the lights, and the gauges, and that this required them to go under unbolted roof. He stated that he never had any indication of convergence, and that no warning lights came on during the process. He kept a warning gauge and light in front of him and behind him.

Mr. Olkkonen felt that removing bolts was easier than installing them, since removal is a one-step process. In installing bolts, a hole has to be drilled first, and then the bolt has to be installed.

He also stated that in one area where he had noted loose rock, he sprayed the edge of the loose with white paint. This was between W-21 and W-23 at N-98 near the intersection of 98 and 23. (FN.9) Although this was an area of suspected loose, it did not fall. At N-101, between W-25 and W-27, there were two areas of loose which fell on February 20. This was a faulted area, and the men anticipated loose coming down. When they sounded it with a bar, there was a drummy sound.

The men also got a drummy sound in the area at W-25 and N-98. Visually, Mr. Olkkonen could see a couple of low-angled faults. The two faults intersected, and there were two areas of loose which overlapped each other. Looking from the side, there was a wedge-shaped, low-angled fault. The men started removing the bolts at the southwest corner of the intersection on February 21 and worked backwards. As they worked across the first piece of loose, they were expecting it to fall. It did not fall, however, until they had removed the bolts from the second, larger piece of loose. Mr. Olkkonen reasoned that the two pieces were keyed together. The section of roof which fell was approximately 20 feet by 28 feet, and varied between six and 24 inches in thickness.

On cross-examination, Mr. Olkkonen was asked whether roof falls sometimes happen very rapidly. After some hesitation, he answered, "Well, it depends on what kind of roof fall you are talking about." He described the February 21 fall as slow and controlled. With respect to the other area which he had marked as faulted, he understood that it was barred down, but he was unsure of this.

William Dorvinen, who has been employed by White Pine since 1956, testified that he operated the roof bolter for nine days, including the period from February 19 to February 21, 1980. He also testified about the various safety precautions which were taken during the bolt removal process. His testimony was consistent with Mr. Olkkonen's concerning where the men on the crew stood while the bolts were being removed. He added that the machine's operator was 12 to 15 feet behind the bolt that was being worked on, and that the other man was about 22 feet away from it. He stated that bolts were removed a row at a time, from right to left, where the back seemed good. If the back did not seem good, they removed one bolt at a time and retrieved it before proceeding. In the nine days that Mr. Dorvinen was on the project, he detected no separation from his examination of borescope holes, and he never saw a safety light come on or observed any convergence in the dial gauges. He stated that Mr. Olkkonen kept daily notes, and the company's rock mechanics took convergence readings. These men also told Mr. Dorvinen that there had been no convergence. When he heard a drummy sound in the roof, the men were more cautious, and anticipated the back to fall as they removed the bolts.

Mr. Dorvinen was present at the February 21 fall near the intersection of N-98 and W-25. The men had sounded the roof and heard a drummy sound. They decided that the loose would fall. He added that he told MSHA inspector Bruce Haataja that they expected it to fall. Before removing the bolts, they drilled and checked borescope holes. They set one gauge and light between the front of the machine and the boom, (FN.10) and they set another gauge and light behind the machine. They removed the bolts from right to left, moving the gauge and light as they removed each bolt. The warning light behind them

was the only source of light in that area, since the area was dark, and the men constantly glanced at it to see if it had come on. He noted that on the north side there were separation lines where the ground had moved.

When the loose piece came down, he jumped back. He noted some sagging before they removed the last two bolts. He also stated that the thinnest part of the loose was located near where the last bolt was removed, i.e., closest to where the men were standing. He asserted that he never felt he was in danger at any time during his nine days in the area.

On cross-examination, Mr. Dorvinen stated that there were no discussions with Mr. Haataja that day with regard to stopping operations or with respect to continuation of the program after the fall. He testified that work was stopped after the fall only because it occurred at or near the end of the working shift. (FN.1) He also stated that there was other mining activity in Unit 56, approximately 300 feet to the north of the test site.

When cross-examined by the Union representative, Mr. Dorvinen agreed with Mr. Olkkonen that bolt removal was safer than bolt installation, and that ground falls are predictable through convergence readings. He also said that if the large piece of ground had fallen on the machine it would have only shaken up the machine's cab. He added that he had not been in the test area since February 21, 1980.

Albert Goodreau also testified for Applicant. Mr. Goodreau is a safety engineer at White Pine who has been with the company for eight years. His primary duty is to accompany MSHA inspectors on the mine property. He testified that he was served with the withdrawal order on February 19, 1980. The first modification was issued to another White Pine official, a Mr. Butson, on February 22. The second modification was issued to Mr. Goodreau on February 25.

MSHA's first witness was Bruce Haataja, the MSHA inspector who issued the withdrawal order and modifications. He was assigned to inspect the test area by his supervisor, William Carlson. Mr. Carlson told Mr. Haataja there was a possibility of someone getting hurt in the test area as the bolts were being removed from the roof.

Mr. Haataja stated that the bases for his conclusion that an imminent danger existed was that the back was unsupported, that it was drummy in some places, and that the roof had fallen in three areas. The roof in these areas was faulted. He testified that when he arrived at the test site on February 19, he found that warning signs had been put up by White Pine to keep everyone but authorized personnel out of the area. Mr. Haataja added MSHA's "Keep Out" signs to the company's signs.

He stated that when the two foremen were removing roof bolts, they always stood behind and in the vicinity of the roof bolter. With the boom of the bolter extended, the men were 10 to 15 feet behind the bolts being removed. The machine's operator was under a protective canopy. Mr. Haataja said that the men were using dial gauges and warning lights, and that he never saw a light go on that day, nor did he see any significant convergence indicated on the dial gauges. He admitted that he did not personally sound the roof with a trimming bar, and that he did not observe a ground fall on February 19, although he did see some fallen ground on the floor. The inspector was not sure when this loose came down.

Before issuing the withdrawal order, he did not go to the rock mechanic's office and review available convergence data. He stated that he was unaware of any rock instability found by the rock mechanics as of February 19. At one point, he was asked, "[Y]ou didn't have any indication on the day you issued that order that there was anything in the test area that was unstable, did you?", and answered: "I don't know \* \* \* we didn't have time to get convergence readings in there to make the decision. The roof bolts were removed. That condition right there was unstable."

Mr. Haataja visited the test area again on February 20 and 21. At about 12:15 p.m. on February 21, he observed the large roof fall. He issued the first modification to the withdrawal order at 7:00 a.m. on February 22. He was asked whether the men who were working in the area told him that it was going to fall, and answered, "They may have." He was also asked why he waited approximately 20 hours after the fall to issue the modification. The inspector answered, "I wanted to discuss the situation with my supervisor." He was then asked, "In other words, you didn't think at the time you observed this fall of ground that the people who were engaged in the operation were in such danger that they should stop operations right then and not continue to remove another roof bolt?" He answered: "Well, if I didn't issue the order at the time, I guess I didn't."

Mr. Haataja also stated that after the roof fall, he did not tell the men to stop work. On recross-examination, he testified that in the three or four days that he was in the test area (between February 18 and February 22), he never observed any kind of peel-back of the roof. When the roof fell on February 21, it hit the roof bolter, but Mr. Haataja did not recall the equipment being damaged. Further, although the inspector was close to the fall, no loose came down in the immediate area where he was standing.

William Carlson, a supervisory mining engineer for MSHA, testified that there was a meeting in his office on February 7, 1980, concerning the White Pine test program. The meeting was attended by Mr. McGunegle and two other White Pine officials. These men briefed Mr. Carlson about the test, and informed him that the bolt removal had already begun. Mr. Carlson expressed some concern that this type of test was unusual and he assigned

Mr. Haataja to follow the program and observe the bolt removal. On cross-examination, he recalled making this assignment after he received a telephone call from Mr. Cestkowski, on behalf of the Union. Mr. Carlson stated that he was surprised to hear from Mr. Cestkowski, since there had always been cooperation between management and the Union concerning "anything out of the ordinary," and things had always gone smoothly. Mr. Cestkowski indicated that the Union was never consulted about this test. MSHA is required to respond to any such complaint, whether it comes from a miner or from a representative of miners. In response to Mr. Cestkowski's call, Mr. Carlson sent two inspectors to check the test site on February 15. These men, Inspectors Spencer and Stile, found the area to be dangered off and did not issue any orders. Mr. Haataja was assigned to follow through on their initial inspection.

Mr. Carlson testified that the Union complaint indicated MSHA should obtain some data on the test; the complaint did not allege imminent danger. He stated that he cannot cite a metal-nonmetal operator simply for changing its roof control plan unless he observes a violation of a standard. He admitted, however, that the concept of mining without support was unusual for this unit, which had always been supported with roof bolts.

William Lutzens, an MSHA mining engineer, testified that on April 1, 1980, he visited the test area. He stated that the area is composed mainly of sandstone with some exposed shale near a fault which traverses the area. This fault is on the northern side of the test area. The roof near the fault was disturbed, fractured, and less competent than the roof in the southern side of the test area. Mr. Lutzens recommended that the operator install and remove temporary supports in a "leap-frog" manner to protect the workers. (FN.12)

On cross-examination, Mr. Lutzens conceded that White Pine generally had a very good ground control program. In his opinion, ground control is "a little bit of an art rather than a science," and the White Pine people are good practitioners of the art. He stated that his recommendation to remove the bolts in a leap-frog fashion was based upon a roof control standard for coal mines (30 C.F.R. 75.200-14), and what he considered to be "good mining practice." He admitted that he never actually observed the bolt removal process in the test area.

Mr. Lutzens stated that roof bolting generally has three purposes: (1) to support unsupported particles; (2) to increase friction between layers and prevent sliding; and (3) to key irregular fractures. Mr. Lutzens said that aside from the large fault at the northern side of the test area, there were approximately 11 smaller faults. He stated that one of these, a wishbone fault which he counted as two faults, might possibly be considered unsafe. He stated that during an April 1 examination, he got a drummy sound from the roof and saw some half-moon areas in borescope holes. This usually indicates

strata slippage. However, he also stated that the convergence data indicated stable roof. While this is generally a good indication of stability, it is not infallible, he said.

~220

John Cestkowski testified on behalf of the Union. He stated that he has been employed at White Pine for the past 21 years, and is the president of the local union. He also serves as chairman of the underground safety committee, the surface safety committee, and the general safety committee. He was first advised of the test on the morning of February 5, 1980, by Julio Thaler, the mine superintendent. He told Mr. Thaler that the Union opposed the test and would protest it. He was concerned that the bolt removal might cause a cave-in which could extend to other mining fronts where people were working, and endanger miners in these areas. Mr. Cestkowski reasserted his opposition to the test at a meeting with management officials held on February 13, 1980. He stated that he called Mr. Carlson around February 13 or February 14 and requested an investigation of the test site to determine if the test was being performed safely.

He testified that the company's warning signs were in big, bold letters and were larger than the danger signs placed by MSHA. However, he felt that the advantage of having MSHA's smaller signs was that the company's signs sometimes fell down or were removed. There was no evidence, however, that the company's signs in the test area were removed.

Mr. Cestkowski disagreed with Mr. McGunegle's contention that 10 to 20 percent of the mine was unsupported. In his opinion, 98 to 99 percent of the mine had some sort of roof support. He knew of no other situation in which White Pine had ever removed any roof bolts, and since 1960, he had never seen any area in White Pine without roof support. He also took issue with previous testimony concerning the reliability of convergence data in predicting roof falls. Mr. Cestkowski noted that on April 23, 1980, there was a fall of ground in Unit 95, where miners were working, and he indicated that convergence data had not been helpful in predicting that fall.

Finally, Mr. Cestkowski disputed the company's contention that it is safer to remove bolts than to install them. He stated that when you remove bolts you do not know what will happen when the bolt comes out. On cross-examination, he stated that the piece of rock that fell in Unit 56 was sandstone. He added that if this rock had hit the roof bolting machine, it would have torn the machine's canopy off or tipped the machine over.

Dale Sain also testified for the Union. He has been a miner at White Pine since 1956. He is a Union committeeman and member of the Union's executive board. He testified that in Unit 95, where he works, there had been a roof fall in April 1980, and that prior to the fall the rock mechanics had read convergence points and said nothing about the readings. This led Mr. Sain to believe that the convergence data indicated a safe roof, and his foreman told him that the convergence did not indicate there would be a fall. Mr. Sain also stated that he had several hundred hours of experience operating a roof bolter of the type that was used in removing the bolts in Unit 56. Based on this experience, he testified that a two- to three-ton chunk of rock hitting the machine could flip it over. He added that he knew of one fatality which occurred in 1957 under this type of ground. On cross-examination, however, he stated that the company was not using convergence data, warning lights, or dial gauges at that time.

Mr. Sain disputed the company's contention that 10 to 20 percent of the mine was unsupported, and agreed with Mr. Cestkowski that 98 to 99 percent of the mine was supported. He disagreed that it was safer to remove bolts than to install them. He explained that when a miner is installing bolts, he is usually about 10 feet away from solid rock, whereas in bolt removal the entire area is open.

White Pine recalled Al Goodreau as a rebuttal witness. Mr. Goodreau stated that he was familiar with the facts and circumstances surrounding the roof fall in Unit 95. The information which he collected on that incident revealed that at 2:30 p.m. on the day in question, the warning lights came on, and the dial gauges indicated that the roof had sunk 12/1000 of an inch. The warning lights and gauges were reset, and at 2:40 p.m., the lights went on again. The gauges indicated that the roof had come down 18/1000 of an inch. The lights and gauges were reset once more, and at 2:55 p.m., the gauges indicated that the roof had come down a total of 54/1000 of an inch. The roof caved in shortly after that, at approximately 3:05 p.m.

### CONCLUSIONS OF LAW

Section 107(a) of the Act reads:

If, upon any inspection or investigation of a coal or other mine which is subject to this Act, an authorized representative of the Secretary finds that an imminent danger exists, such representative shall determine the extent of the area of such mine throughout which the danger exists, and issue an order requiring the operator of such mine to cause all persons, except those referred to in section 104(c), to be withdrawn from, and to be prohibited from entering, such area until an authorized representative of the Secretary determines that such imminent danger and the conditions or practices which cause such imminent danger no longer exist. \* \*

The Commission's predecessor, the Interior Board of Mine Operations Appeals, set up the following test to determine whether a particular situation constitutes an imminent danger:

> [W]ould a reasonable man, given a qualified inspector's education and experience, conclude that the facts indicate an impending accident or disaster, threatening to kill or to cause serious physical harm, likely to occur at any moment, but not necessarily immediately? The uncertainty must be of a nature that would induce a

reasonable man to estimate that,

if normal operations designed to extract coal in the disputed area proceeded, it is at least just as probable as not that the feared accident or disaster would occur before elimination of the danger.

Freeman Coal Mining Corporation, 2 IBMA 197, 212 (1973), aff'd sub nom., Freeman Coal Mining Company v. Interior Board of Mine Operations Appeals, 504 F.2d 741, 745 (7th Cir. 1974). See also Old Ben Coal Corporation v. Interior Board of Mine Operations Appeals, 523 F.2d 25, 32 (7th Cir. 1975). The test of imminence is objective, and "the inspector's subjective opinion need not be taken at face value." 2 IBMA at 212. However, the applicant in a proceeding such as this one bears the burden of showing by a preponderance of the evidence that imminent danger did not exist. Lucas Coal Company, 1 IBMA 138, 141-42 (1972); Carbon Fuel Company, 2 IBMA 42 (1973). In this case, I believe White Pine has sustained this burden.

The company showed that although roof bolt removal is an intrinsically dangerous process, the procedures which it adopted and carried out did not present an imminent danger either on the date of issuance of the initial withdrawal order or on the dates when the first and second modifications were issued. These procedures included dangering off all entrances to the test area with large, conspicuous signs that read, "Restricted Area -Authorized Personnel Only." The testimony was that the signs were larger than the "Keep Out" signs that MSHA added after the imminent danger order was issued. The test area selected by the operator had a thick sandstone top. A sandstone top is more stable than a slate top. The men selected to remove the bolts were experienced and highly trained foremen. They appeared to be knowledgeable in safety techniques and were extremely cautious in removing the bolts. They proceeded in a retreat manner, while visually inspecting the area, sounding the roof, and using warning lights and dial gauges. They had the benefit of maps which indicated that the southern part of the area had no significant faults, although the northern part had a large fault. White Pine established 19 convergence points in the test area, including one at each intersection. Convergence readings were regularly taken to determine if there was any downward movement of the roof. The miners used a roof bolting machine which had a 10- to 12-foot long boom, and a three-foot-square metal canopy. One miner was protected by the canopy; the other miner stood at the rear of the machine, under supported roof. Warning lights and dial gauges were placed in front and in back of the machine. The men regularly observed these gauges.

MSHA entered the picture when representatives of the company visited the office of Inspector Carlson on February 7, 1980. They briefed him about the test even though they were not obligated to obtain MSHA's permission. Mr. Carlson did not object to the test, although he had some doubts about the reaction of the miners to the test. When the Union heard about the test, it complained to MSHA. MSHA investigated the complaint, as it is required to do. MSHA then became concerned about the test and Inspector Haataja issued the withdrawal order. The

order did not curtail the test, but superimposed MSHA's

warning signs over the signs of the operator. There was no basis for issuing this order. The testimony of Inspector Haataja does not support the contention that an imminent danger existed at the time.

The first modification was issued after the February 21 roof fall described in the testimony. The evidence was that this modification was not issued until February 22, the day after the fall, and only after Mr. Haataja conferred with his supervisor, Mr. Carlson. I do not believe Mr. Haataja considered this situation to be an imminent danger on his own. If he had, he would have modified the order immediately after the fall. Apparently, he considered this a debatable matter. In fact, one of the foremen, Mr. Dorvinen, testified that Mr. Haataja did not indicate after the fall that he was going to modify the order, and that the inspector did not comment one way or the other. There was no additional justification given for the issuance of the second modification.

Admittedly, the February 21 roof fall was substantial. However, the evidence was that the company had anticipated it from visual observations and soundings. They knew that there was a fault in the area. The precautions that White Pine took at that time were reasonable to protect the safety of the men involved. Therefore, I hold that the order and its modifications were improperly issued.

#### ORDER

Withdrawal Order No. 298441, dated February 19, 1980, and its modifications of February 22 and 25, 1980, are VACATED.

### ~FOOTNOTE\_ONE

1 Order No. 298441 read as follows:

"A violation of a mandatory standard was not observed. This order is issued to forbid persons from entering the test area in Unit 56 until it is established the test area is stable. This area is closed to all persons except those selected to perform the test duties and inspection."

The first modification read:

"A violation of a mandatory standard was not observed. This action is taken to modify Order No. 298441, dated 2-19-80. A fall of ground occurred in N101 & N98 & W25 intersection in Unit 56 test area immediately following removal of roof bolts. This area is closed to all persons and no further work shall be performed until roof support has been installed. \* \* \*"

# The second modification read:

"This action is taken to modify Order 298441, dated 2-19-80. No more roof bolts shall be removed from the areas that are already bolted unless supplemental support is provided. That support shall be on the same centers as existing bolts. Only after the roof bolt removal program is completed shall the supplemental support be removed."

### ~FOOTNOTE\_TWO

2 Although MSHA's witnesses testified first at the hearing, in the interest of clarity the testimony of Applicant's witnesses will be synopsized first.

### ~FOOTNOTE THREE

3 In retreat mining, the mining operation, or in this case the bolt removal, proceeds in an outby direction so that the men doing the work were backing away from the area where bolts had been removed. The men were thus operating under supported roof.

# ~FOOTNOTE\_FOUR

4 Convergence data is gathered by taking measurements with a device called an "extensometer rod" to determine the distance from the floor to the roof. These measurements are taken at periodic intervals and compared to determine whether there is any downward movement of the roof. These rods are capable of measuring roof sags as small as 1/1000 of an inch. Mr. McGunegle stated that generally, a roof which is unstable will start to move downwards and this movement will be reflected in the convergence data. He also testified that he had personally taken some convergence readings in this area, and had assisted in retrieving bolts from unbolted areas.

### ~FOOTNOTE\_FIVE

5 The use of borescopes, or stratascopes, involves drilling holes in the roof and shining a light into the holes to examine for signs of shifting or other instability. Steel tape measures may also be inserted into such holes to feel for separations in the roof layers.

### ~FOOTNOTE\_SIX

6 Gauges and warning lights are attached to extensometer rods to detect any sagging in the roof and measure the amount of sag.

### ~FOOTNOTE\_SEVEN

7 Sounding involves striking the roof with a bar and listening for a hollow or "drummy" sound which would indicate an unstable roof.

### ~FOOTNOTE\_EIGHT

8 "Keystoning" is a term used to denote the use of a bolt to hold up a block of roof and "key" it to other such blocks.

### ~FOOTNOTE NINE

9 The coordinates used in this Decision are taken from the

mine map which was admitted into evidence as White Pine's Exhibit 5.

### ~FOOTNOTE\_TEN

10 Mr. Dorvinen stated that normally the men would place a warning light and gauge in the unbolted area. Here, however, because of the less secure roof, they placed the light and gauge between the boom and the machine.

#### ~FOOTNOTE ELEVEN

11 Mr. Dorvinen explained that in this unit, as elsewhere in the mine, there were three shifts, and work went on seven days a week. However, the bolt removal was done only during one shift, which ran from 7:00 a.m. to 3:00 p.m.

# ~FOOTNOTE\_TWELVE

12 "Leap-frogging" involves the installation of temporary supports near the roof bolts. After the bolts are removed, the supports are pulled away with chains. This procedure would be followed row by row as the workers proceeded backwards, in an outby direction.