

FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

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WASHINGTON, D.C. 20006

August 19, 1996

SECRETARY OF LABOR, :
MINE SAFETY AND HEALTH :
ADMINISTRATION (MSHA) :
: Docket Nos. CENT 92-329
v. : CENT 93-272
: :
BHP MINERALS INTERNATIONAL INC. :

BEFORE: Jordan, Chairman; Holen, Marks and Riley, Commissioners

DECISION

BY THE COMMISSION:

This civil penalty proceeding, arising under the Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 801 et seq. (1994), involves a citation issued to BHP Minerals International Inc. (“BHP”) alleging a significant and substantial (“S&S”)¹ violation of 30 C.F.R. § 77.506 (1995).² Administrative Law Judge Arthur Amchan found that BHP had not violated the standard. 16 FMSHRC 1177 (May 1994) (ALJ). For the reasons that follow, we reverse and remand.

¹ The S&S terminology is taken from section 104(d)(1) of the Act, 30 U.S.C. § 814(d)(1), which distinguishes as more serious in nature any violation that “could significantly and substantially contribute to the cause and effect of a . . . mine safety or health hazard”

² 30 C.F.R. § 77.506, entitled, “Electric equipment and circuits; overload and short-circuit protection,” provides:

Automatic circuit-breaking devices or fuses of the correct type and capacity shall be installed so as to protect all electric equipment and circuits against short circuit and overloads.

I.

Factual and Procedural Background

BHP operates the Navajo mine, a surface coal mine in northwestern New Mexico. 16 FMSHRC at 1177. On April 28, 1992, during an electrical inspection of the mine, Inspector David Head, with the Department of Labor's Mine Safety and Health Administration ("MSHA"), examined a high-wall drill. *Id.* at 1179; Tr. 55, 61. The circuit for the motor was protected by a circuit breaker that provided both instantaneous and thermal overcurrent protection. Tr. 91-92. The instantaneous breaker had a "low" and "high" setting with eight intermediate settings. Tr. 64, 74. The trip unit on the instantaneous breaker provided settings that ranged from 1800 to 6000 amperes ("amps"). Tr. 74. The breaker had been set on 6000, the highest setting. Tr. 64.

Based upon calculations performed in accordance with the National Electric Code ("NEC"), Inspector Head determined that adequate instantaneous overcurrent protection had not been provided for the motor. Tr. 65-67. The inspector stated that section 430-52 of the NEC provides that an instantaneous breaker must be set at the lowest setting capable of carrying the "normal starting load" of the motor. Tr. 65, 67. This setting is calculated by multiplying the full-load current of the motor by 700%. Tr. 65. If the motor cannot operate at that level, the setting may be increased only as necessary by increments, but in no event shall it exceed 1300% of the motor's full-load current.³ 16 FMSHRC at 1179; Tr. 65-67. From the nameplate of the drill motor, the inspector determined that the full-load current of the motor was 400 amps. 16 FMSHRC at 1180. He then calculated that 1300% of the full-load current was 5200 amps (400 multiplied by 1300%). Because the breaker had been set on high, or at 6000 amps, he concluded that it had been set in excess of 1300% of the full-load current of the motor (5200 amps). Tr. 65-67, 81.

The inspector explained that an instantaneous breaker automatically trips when there is a short circuit and that, if it were set too high, the breaker would not stop electrical current until dangerous amounts had flowed to the motor. Tr. 66, 68-70. A delay of only fractions of a second in tripping the breaker would increase miners' exposure to the hazards of fire, electrical burns or shock. 16 FMSHRC at 1179. Accordingly, Inspector Head issued a citation alleging an S&S violation of section 77.506. *Id.* The citation was terminated after the operator adjusted the breaker to the "low" setting. Tr. 71. BHP challenged the citation and the matter proceeded to hearing before Judge Amchan.

The judge determined that the instantaneous circuit breaker had been set in excess of 1300% of the full-load current of the motor. 16 FMSHRC at 1180. In reaching this determination, the judge credited testimony that the full-load current was approximately 438 amps and that the breaker would stop the flow of electricity to the motor at 6000 amps at the high

³ Section 430-52 of the NEC was not admitted as an exhibit into the official record.

setting.⁴ *Id.* at 1179, 1180. Nonetheless, the judge found that the standard did not provide the operator with sufficient notice of its requirements and that a “reasonably prudent operator’s electrician” would not have recognized that the circuit breaker had been set in violation of the standard or the NEC. *Id.* at 1180-81. He explained that neither section 77.506 nor the NEC was clear in specifying the allowable settings for BHP’s circuit breaker. *Id.* at 1180. Accordingly, the judge vacated the citation. *Id.* at 1184.

The Secretary filed a petition for discretionary review challenging the judge’s determination, which the Commission granted.

II.

Disposition

The Secretary argues that the judge erred in finding that BHP did not violate section 77.506 and in holding that application of the standard and NEC were not clear. PDR at 3-5.⁵ The Secretary notes that the judge found that the instantaneous circuit breaker setting exceeded 1300% of the full-load current of the motor and that the parties agreed on the meaning of the standard and the applicability of the NEC. *Id.* at 5. BHP responds that the judge correctly determined that the standard failed to give adequate notice of its requirements, as supported by the witnesses’ differing testimony on whether the instantaneous breaker had been set beyond the limit allowed by the NEC. BHP Br. at 3-5. BHP asserts that it never agreed that a setting in excess of 1300% amounted to a violation of section 77.506. It contends it presented testimony that the setting, which was below 1300%, did not amount to a violation. *Id.* at 6. BHP explains that neither the NEC nor the regulation set forth a particular setting for the breaker. *Id.* In addition, neither the NEC nor the regulation specify that a setting exceeding 1300% will fail to “protect all electrical equipment and circuits [against] short circuits and overloads.” *Id.*, quoting 30 C.F.R. § 77.506. It contends that, regardless of the setting of the instantaneous breaker, overcurrent protection was provided by the thermal breaker. *Id.* at 7.

Applicability of the NEC is undisputed in determining compliance with section 77.506. Title 30 C.F.R. § 77.506-1, entitled, “Electric equipment and circuits; overload and short circuit protection; minimum requirements,” provides that “[d]evices providing either short circuit protection or protection against overload shall conform to the minimum requirements for protection of electric circuits and equipment of the National Electric Code, 1968.” In addition, as the judge found, the “parties agree that the criteria for complying with section 77.506 are found in

⁴ Under the judge’s findings, 1300% of the full-load current of the motor is 5694 amps (438 multiplied by 1300%). 16 FMSHRC at 1180. Because the judge found that the breaker had been set at 6000 amps, it had been set in excess of 1300% of the motor’s full-load current.

⁵ Pursuant to Commission Procedural Rule 75(a)(1), 29 C.F.R. § 2700.75(a)(1) (1995), the Secretary designated his petition for discretionary review as his brief.

the National Electric Code (NEC) and, more specifically, NEC section 430-52.” 16 FMSHRC at 1179.

Witnesses had differing opinions on whether the breaker had been set in excess of 1300% of the full-load current of the drill motor in violation of section 430-52 of the NEC. Lynn Byers, BHP’s chief mechanic, testified that the full-load current of the motor was 438 amps, that the breaker would trip at 5400 amps and that, accordingly, the breaker had been set at 1232% of the full-load current of the motor. 16 FMSHRC at 1180; Tr. 113. In contrast, the Secretary’s witnesses testified that the full-load current was 400 amps, that the breaker would trip at 6000 amps, and that the breaker had been set in excess of 1300%. 16 FMSHRC at 1180. The judge found that the full-load current was approximately 438 amps and that the breaker was set at 6000 amps. *Id.* Neither party disputes these findings. *See* BHP Br. at 5; PDR at 4-5. Therefore, under the judge’s findings, the instantaneous breaker had been set in excess of 1300% of the full-load current of the drill’s motor (which equaled a ceiling of 5694 amps) in violation of the requirements of the NEC and section 77.506.

Although section 77.506 and the NEC do not specify the exact setting for the instantaneous breaker and witnesses disagreed on whether the breaker setting exceeded that allowed by the NEC, we reject BHP’s argument that section 77.506 did not provide it with adequate notice that BHP had violated the regulation. When faced with a challenge that a standard fails to provide adequate notice of prohibited or required conduct, the Commission has applied an objective standard, i.e., the reasonably prudent person test. The Commission has explained that the appropriate test is whether a reasonably prudent person familiar with the mining industry and the protective purposes of the standard would have recognized the specific prohibition or requirement of the standard. *Ideal Cement Co.*, 12 FMSHRC 2409, 2416 (November 1990). In order “to afford adequate notice and pass constitutional muster, a mandatory safety standard cannot be ‘so incomplete, vague, indefinite or uncertain that [persons] of common intelligence must necessarily guess at its meaning and differ as to its application.’” *Id.*, quoting *Alabama By-Products Corp.*, 4 FMSHRC 2128, 2129 (December 1982) (citations omitted). The Commission has recognized that the various factors that bear upon what a reasonable person would do include accepted safety standards in the field, considerations unique to the mining industry, and the circumstances at the operator’s mine. *See U.S. Steel Corp.*, 5 FMSHRC 3, 5 (January 1983).

Inspector Head and the Secretary’s expert witness, Terrence Dinkel, testified that the NEC requires an instantaneous circuit breaker to be set at 700% of its full-load current and then to have that setting increased only as necessary to start the motor, but never exceeding the 1300% maximum limit. Tr. 74-75, 117-18. Inspector Head estimated that 98% of all equipment should be able to start at 700% of the full-load current. Tr. 79. Dinkel also stated that 700% is almost always a sufficient setting to start a motor and that the higher settings are reserved for rare cases involving high-torque motors that cannot start at lower settings. Tr. 118-19. Byers, BHP’s chief mechanic, acknowledged that “[t]he code [NEC] wants to give you what you need, but they don’t want to give you anything more.” Tr. 112.

BHP's instantaneous breaker had been set at the highest setting. Tr. 64. There was no indication in the operator's records of the reasons for that setting or whether lower settings had been tried. Tr. 90. When the breaker was placed on the lowest setting, or 1800 amps, in order to abate the citation, the motor was able to function. Tr. 71. In light of the testimony of all witnesses that the breaker was required to be placed on the lowest possible setting to start the motor and unrebutted testimony that the higher settings are reserved only for rare cases involving special equipment that cannot start at lower settings, we conclude that a reasonably prudent person would have recognized that placing the instantaneous breaker on the highest setting would not provide adequate overcurrent protection as required by section 77.506.

We find unpersuasive BHP's argument that, regardless of the setting of the instantaneous breaker, BHP did not violate section 77.506 because overcurrent protection was also provided by the thermal breaker. BHP Br. at 7. It is not clear from the record that the instantaneous breaker and thermal breaker provided identical protection. *See* Tr. 106-07. In any event, even if their protection were identical, section 77.506 does not provide that automatic circuit-breaking devices need not adequately protect against short circuits and overloads if a functioning backup system exists. Rather, the standard's broad language requires that any automatic circuit-breaking device must protect against short circuits and overloads. Thus, BHP was required to properly set the instantaneous breaker independent of its requirement to properly set the thermal breaker.⁶

⁶ Evidence that the thermal breaker also provided overcurrent protection would be relevant to the determination of whether BHP's violation was S&S.

III.

Conclusion

For the foregoing reasons, we reverse the judge's determination that BHP did not violate section 77.506. We remand for consideration of whether the violation was S&S and for the assessment of a civil penalty.

Mary Lu Jordan, Chairman

Arlene Holen, Commissioner

Marc Lincoln Marks, Commissioner

James C. Riley, Commissioner