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FMC V. SOL (MSHA)
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Federal Mine Safety and Health Review Commission
Office of Administrative Law Judges

FMC CORPORATION,
CONTESTANT

CONTEST PROCEEDING

v.

Docket No. WEST 84-117-RM
Citation No. 2009928; 6/20/84

SECRETARY OF LABOR,
MINE SAFETY AND HEALTH
ADMINISTRATION (MSHA),
RESPONDENT

FMC Trona Mine

DECISION

Appearances: John A. Snow, Esq., James A. Holtkamp, Esq.,
and Matthew F. McNulty, III., Esq., Salt Lake City,
Utah, for Contestant; James H. Barkley, Esq., and
Margaret Miller, Esq., Office of the Solicitor,
U.S. Department of Labor, Denver, Colorado, for
Respondent.

Before: Judge Lasher

This proceeding arose upon the filing of a notice of contest
on July 10, 1984, pursuant to Section 105(d) of the Federal Mine
Safety and Health Act of 1977 (30 U.S.C. 815(d) (1977)), herein
the Act.

By its initiation of the proceeding the Contestant (herein
FMC) sought to obtain review of Part "a" (FOOTNOTE 1) Citation No.
2009928, issued June 20, 1984, charging it with a violation of 30
C.F.R. 57.2178 (FOOTNOTE 2) to wit:

"The Marietta Bore Miner No. 7426 approval No. 2G2431A2,
was not maintained in permissible condition because:

(a) On 3/29/84 the short circuit protective relays at
the remote starter were found to be set for 1200
amperes fault current.

A short-circuit analysis indicated that the minimum expected phase-to-phase fault current was 1005 amperes. Therefore, the machine and trailing cable were not properly protected against short-circuit faults. Ref 30 C.F.R. 18.35(a)(4) and 18.35(a)(5)(ii). The protective relay settings were reduced to 800 amperes 5Ä1Ä84.

Although the manufacturers MSHA approved design specification Ref. 2GÄ2431AÄ2 (FOOTNOTE 3) stipulates maximum relay settings of 1200 amperes the specification also stipulates maximum trailing cable length as follows: "Cable from power source to sled input is less than 100 feet. Total length from power source to machine not to exceed 700 feet. Protection at power source is provided by a circuit breaker with an instantaneous trip setting of 1500 amperes.

It was found that the 4160 volt Bore Miner branch circuit was far in excess of these specifications."

FMC operates a large underground trona mine (Tr. 46, 62). It liberates approximately 1,500,000 cubic feet of methane each 24 hour period (Tr. 46). It is an extremely gassy mine (Tr. 47), and, as conceded by Contestant, the mine's face equipment is required to comply with the permissibility regulations (Tr. 47; FMC Brief, p. 1).

The pertinent permissibility regulation mentioned in the Citation is 30 C.F.R. 18.35(a)(5)(ii), (FOOTNOTE 4) under the rubric: "Portable (trailing) cables and cords", which provides:

"(a) Portable cables and cords used to conduct electrical energy to face equipment shall conform to the following:

* * * * *

(5) Ordinarily the length of a portable (trailing) cable shall not exceed 500 feet. Where the method of mining requires the length of a portable (trailing) cable to be more than 500 feet, such length of cable shall be permitted only under the following prescribed conditions:

* * * * *

(ii) Short-circuit protection shall be provided by a protective device with an instantaneous trip setting as near as practicable to the maximum starting-current-inrush value, but the setting shall not exceed the trip value specified in MSHA approval for the equipment for which the portable (trailing) cable furnishes electric power."

CONTENTIONS OF THE PARTIES

The evidence and arguments in this matter are difficult to marshal. A preliminary birds-eye view of the dispute is helpful.

The Secretary's contentions, evidenced at hearing and in its post-hearing brief, consider Part "a" of the Citation to have alleged two infractions. First, that the trip setting on the short-circuit protection device required by the cited regulation, 30 C.F.R. 18.35(a)(5)(ii), was set too high at 1200 amperes. Secondly, the Secretary alleges that FMC was in violation by operating the miner contrary to the manufacturer's specifications as to the lengths of trailing cable between the miner and (1) the sled, and (2) the "power source", as set forth in the second government approval, Ex. CÄ2, at page 8, which FMC denies receiving or of having any knowledge.

FMC, in addition to denying any knowledge of the requirements of the second approval ("revising" the manufacturer's specifications for the miner and sled), contends that it faithfully conformed to the requirements of the first approval (Ex. CÄ1, Tr. 91) which authorized a trip setting of 1200 amperes and that it had no knowledge of the second approval which set forth maximum trailing cable lengths between the miner and sled and power source and wherein the only reference to the term "power source" is used. FMC contends that the term "power source" in any event is vague and that the wording of 30 C.F.R. 18.35, "when reviewed in context with the specific 1200 amp setting requirement, is difficult to interpret and follow" and fails to afford FMC of fair notice as what is required and expected. As an alternative argument, should it be charged with notice of the second approval containing the cable length requirements, FMC

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argues that the "power source" was the remote starter sled, and that the 700-foot trailing cable length between the miner and the sled was proper. In this connection, the Secretary contends that the "power source" referred to in the second approval (Ex. CÄ2) is a transformer located 10,300 feet from the miner and which is the point of origination of the 4160 volt power upon which the miner runs.

PRELIMINARY FINDINGS

The preponderant reliable and probative evidence of record establishes the following.

On March 29, 1984, a federal mine inspector inspected the mine, including Marietta Bore Miner No. 7426 (herein the miner) (Tr. 47, 83). The purpose of the miner is to mine the product; the miner thus operates at the face past the last open crosscut (Tr. 47). It is electrically powered (Tr. 47) and as an electrically powered piece of face equipment it is required to comply with all permissibility regulations.

The miner was ordered by FMC by purchase order dated May 7, 1973, and the miner was received by FMC on July 5, 1974 (Tr. 42, 259). National Mine Service Company was the manufacturer of the miner and its accompanying power sled (Tr. 258). The 1200 ampere relay setting on the power sled for the miner was set by FMC in accordance with the schematic diagram prepared by National Mine Service Company (Tr. 258; Ex. CÄ1). The schematic drawing or print contains the following admonition: "This drawing is not to be changed without approval of the Bureau of Mines." (Tr. 259). This first certification approval for the miner was subsequently revised in a July 30, 1974 transmittal from Joseph J. Seman, of the Mining Enforcement and Safety Administration, to National Mine Service Company (Ex. CÄ2), herein referred to as the "second approval." FMC was never apprised of the revision contained in the second approval and continued to operate the miner in accordance with the schematic print requirements that were delivered with the machinery in question (Tr. 259-261). The Secretary failed to establish FMC's knowledge or awareness of the second approval, actually or constructively. (Tr. 232, 233, 288-290). FMC had no knowledge of the second approval prior to or at the time of inspection (Tr. 264, 288-290, 320, 330, 354-355).

On the day of the inspection the miner derived its power as generally shown in Exhibit RÄ1. Thus, the initial source of all mine power was a surface generator connected to a surface transformer delivering 13,800 volts (Tr. 48). From this surface generator a power cable transmitted the power to a second transformer located underground (Tr. 48). At the second transformer the power was reduced to 4,160 volts (Tr. 48, 49,) and this electric current (4160 volts) by which the miner was powered (Tr. 64) traveled from the second transformer 10,300 feet through a

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starter sled to the miner (Tr. 48-56, 59, 100). The starter (remote control) sled was downstream some 9,600 feet from the transformer and 700 feet upstream of the miner (Tr. 48, 51, 104-106, 109, 144, 269, 331; Ex. C-1). The miner's remote starter sled contained the on-and-off switch for the miner and its short circuit protective device (Tr. 48, 50) the trip setting for which was set at 1,200 amps (Tr. 48, 56) which is arrived at by COMPUTATION (Tr. 261).

A relay (protective device) setting is the predetermined amount of fault current required to deenergize a machine (Tr. 128-130, 282). Fault current is the amount of current (amps) which will flow through a wire in the event of a fault (short circuit) (Tr. 129, 146, 147, 340).

The power source of the 4,160 volts to the miner was the 4,160 volt transformer (Tr. 49, 59, 60, 64-67, 80, 92-95, 131-133, 140a, 160-161, 193, 199, 311-313, 344, 363; Ex. R-2).

In evaluating FMC's contention that the starter sled, rather than the transformer, was the "power source", it is first noted that the purpose for the remote control sled is to comply with regulations which prohibit high voltage switching devices on miners (Tr. 50). Therefore, a high voltage on/off switch must be placed in a remote location away from the face and in fresh air (Tr. 51). This on and off switch does not produce power as a source, but simply "interrupts" it (Tr. 59). Under FMC's arrangement, had there been a short-circuit in the miner, the power would have been interrupted 700 feet away at the started sled (Tr. 50). It is also noted (1) that IEEE (FOOTNOTE 5) Greenbook (Ex. R-2) mentions only generators or transformers as power sources and (2) that the 4160 voltage upon which the miner was powered originated at the second (underground) transformer 10,300 feet distant (Tr. 135-138).

The maximum starting "inrush" current of the miner was 613 amps (Tr. 146, 208). "Maximum starting current inrush Value" is the amount of current expressed in amperes required to start the miner (Tr. 129, 318-319, 338-339). Once the miner is started even less current is required to keep it running (Tr. 129).

As previously noted, on the day of the inspection (March 29, 1984), the trip setting on the short circuit device for the miner (located on the sled) was set at 1200 amperes (Tr. 48, 56, 267). Such 1200-ampere setting was specified by the first government approved manufacturer's specification for the miner (Ex. C-1) and was not specified to be either a "maximum," "ceiling" or "minimum" setting, or otherwise characterized (Ex. C-1, Tr. 207, 210).

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At the time of the March 29, 1984 inspection, both parties present (MSHA and FMC) agreed that resetting the switch to a lower setting "would put FMC out of compliance with the specifications in the print" (Tr. 268). The MSHA inspectors were unwilling to see the setting reduced for fear of violating the specifications contained in the schematic print (Tr. 268-270). Only after a second inspection was undertaken on May 1, 1984, and presumably further contemplation, was FMC authorized to reduce the setting (Tr. 268).

Subsequent to March 29, 1984, a fault current (short-circuit) analysis was conducted by MSHA electrical engineer Terrance D. Dinkel which indicated that the minimum phase fault current, in the event a fault occurred in a cable at the miner, to be 1005 amperes. Had such a fault occurred with the trip setting on the protective device on the sled set at 1200 amperes, the circuit would not have been interrupted (Tr. 149, 150, 166). Thus, the miner was not adequately protected against short-circuit faults (Tr. 155-156). To make the short-circuit protection effective, the maximum inrush current being 613 amps and the low fault current being 1005 amps, the trip setting should have been set as close to the 613 ampere setting as possible (Tr. 151, 152, 164) in approximately the 650-700 ampere range. Qualified electrical engineers are able to make such adjustments to the trip setting (Tr. 154-155, 179, 201, 219).

The only trailing cable outby the miner (upstream from the miner toward the surface transformer) was the 700-foot length of cable between the miner and the starter sled (Ex. R-1; Tr. 41, 62a, 63, 110, 270). The 9600-foot length of cable between the sled and the second (4160 volt) transformer-found to be the "power source" herein-was "feeder" cable or power cable, and was not trailing (portable) cable for the miner within the meaning of 30 C.F.R. 35.18(a)(5)(ii) (Tr. 60, 63, 68, 77, 110, 116, 278-281).

The longer the cable, the greater amount of current is lost as it travels through the cable (Tr. 148, 156, 160-164, 192) because of "resistance" in the conduction of the current (Tr. 160). Loss of fault current as it travels through excessive cable thus can result in a circuit breaker not tripping (Tr. 148-150, 151-161, 175).

The safety standard (Section 35.18(a)(5)) relied on by the Secretary contains no reference to the term "power source." Nor is this term found in the original schematic print (Ex. C-1) for the miner's electrical set-up. It appears, from the standpoint of the documentary evidence herein, only in MSHA's subsequent second approval (Ex. C-2, p. 8) since the provisions of Ex. C-3, p. 5 do not apply to the miner in question (Tr. 108, 114).

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The applicable "power source" language in toto-relied upon by the Secretary relating to the excessive cable length issue - found in the second approval dated July 30, 1974, (Ex. CÄ2, p. 8) reads as follows:

TRAILING CABLE

3 Conductor, No. 2, SHDÄGC, 5 kv, 2.09" O.D., flame-resistant between miner and remote skid-mounted (open-type) sled containing starter and Femco ground monitor chopper receiver. Power input and output of sled unit is made through quick disconnect plugs. Cable from power source to sled input is less than 100 feet. Total length from power source to machine not to exceed 700 feet. Protection at power source is provided by a circuit breaker with an instantaneous trip setting of 1500 amperes. (Emphasis added)

DISCUSSION, ULTIMATE FINDINGS,
AND CONCLUSIONS

Taking up the first alleged infraction mentioned in the Citation, that relating to the 1200 ampere trip setting, FMC's primary contention is set forth at page 6 of its Brief, to wit:

"MSHA suggests that the specifications regarding short-circuit protection provided by the manufacturer should have been modified by FMC in accordance with the regulations found at 30 C.F.R. 18.35 With this suggestion MSHA asserts that FMC was under a duty to ignore the specific 1200 amp setting and to operate the equipment at an " . . . inferred setting, which should be lower than the ceiling level." Apparently MSHA believes that the 1200 amp setting is the ceiling level. MSHA advances this position in spite of the fact that the manufacturer's specification level of 1200 amps is nowhere referred to as a ceiling level.

In relying upon 18.35 to support its contention of violation, MSHA requires a tortured and unnatural reading of the regulation in question. By MSHA's own admission, such a reading would require the operator to ignore a specifically authorized level and adjust the equipment to an "inferred setting".

I disagree that the regulation, i.e., subparagraph ii, requires the mine operator to ignore a specifically authorized level per se. FMC's argument completely ignores the "excessive cable length" consideration which triggers the applicability of Subparagraph ii). This contention and FMC's claim that it did not have "a fair indication" of what was required by the regulation-require further examination of the standard.

Analysis of section 18.35(a)(5)(ii) reveals that it consists of two phrases separated by a comma-each embodying a distinct concept. The regulation's essence is in the first phrase: that the short-circuit protection shall be provided by a protective device with an instantaneous trip setting as near as practicable to the maximum starting-current-inrush value. The second phrase is a limitation on the first phrase - not a setting independently authorized by the regulation as FMC contends. The second phrase in effect says, that in no event shall the setting required by the first phrase exceed the trip value specified in an MSHA approval.

Applying the requirements of the regulation to FMC's electrical arrangement shown in the record, it is concluded that FMC was required by the regulation to set the instantaneous trip setting "as near as practicable to" 700 amps, which was the approximate starting current inrush value. Since this amperage number was well below the MSHA approved trip value - the second phrase of the regulation clearly and simply had no application to the miner in the circumstances involved here. To illustrate, had the starting current inrush value for some reason been higher, say 1250 amperes, the secondary protective limitation of the second clause of the regulation would have become applicable because the trip value shown in the approved specification was 1200 amperes.

The critical focus must be on what set of circumstances trip the applicability of the standard. Quite simply, a mine operator must comply with the provisions of subparagraph ii of section 35.18(a)(5) where, as here, the miner's trailing cable exceeds 500 feet. Thus, contrary to FMC's argument, its awareness of the second approval (Ex. CÄ2) was not a prerequisite to its obligation to comply with the standard (Tr. 322) and its alleged difficulty with the term "power source" has no bearing on this question.

Reading the regulation in the manner the Secretary urges requires no strained or tortured interpretation as FMC contends. It clearly states "Where the method of mining requires the length of a portable trailing cable to be more than 500 feet, such length of cable shall be permitted only" under the conditions prescribed in subparagraph "ii". At the time of the inspection, and at all other times pertinent herein, FMC knew the miner's trailing cable length was 700 feet and in excess of the 500-foot length permitted without compliance with Subparagraph "ii". The standard, whether viewed in the abstract-or in the context of FMC's mining and electrical arrangement for the miner - was not ambiguous, vague, or uncertain. It is concluded that men of common intelligence would not have to guess at its meaning. Accordingly, FMC's contest as to this facet of part "a" of the Citation is found to lack merit and FMC is found in violation of 30 C.F.R. 57.21Ä78.

Turning now to the second infraction charged to FMC in part (a) of the subject Citation, that involving excessive cable length, it is clear that the Secretary solely relies on the second approval to provide the standard with which FMC must be in compliance. As previously noted, the second approval limits the length of the trailing cable from the power source to the sled input to be "less than 100 feet," and limits the "total length" from the power source to the miner to not exceed 700 feet. This regulation obviously contemplates that the cable from the power source (hereinafter found to be the 4160 volt transformer some 10,300 feet distant from the miner) be of the "trailing" or "portable" variety. This, of course, simply does not fit the electrical cable scheme which FMC had in place at the time of the alleged violation since the only trailing cable involved was the 700-foot length from the miner to the sled. Nevertheless, it is clear that FMC's electrical power scheme contravened the requirements of the second approval as to both the 100-foot and 700-foot provisions. But this is not the decisive question posed. FMC aptly points out that as of July 30, 1974, MSHA (actually MSHA's successor, MESA - the Mining Enforcement Safety and Health Administration, a division of the Department of the Interior), in extending approval for the miner, had modified the certification requirement to restrict the cable length from the power source to the miner to 700 feet, but not apprised FMC of such modification (Tr. 288-290, 330). There is no specification of pertinent cable lengths in the first approval (Ex. C-1; Tr. 262). FMC's contention and evidence that it first learned of the second approval during the second inspection tour on May 1, 1984, was not challenged or rebutted by the Secretary. On the basis of this record, it would appear that the only way a mine operator would learn of such a modification as that contained in the second approval would be, as FMC contends, as a result of the issuance of a citation. In a case involving analogous circumstances, *Secretary v. U.S. Steel Mining Company*, 6 FMSHRC 1369, 1371 (1984), Judge Gary Melick made the following determination:

"MSHA Inspector James Potiseck conceded that he could not verify that the mine operator had received notice of the necessary modification either from MSHA or from the Service Machine Company prior to the issuance of his citation. Indeed, Potiseck admitted that the letter in evidence (Government Exhibit No. 9) supposedly informing U.S. Steel of the required changes was sent to the wrong address. The district electrical engineer for U.S. Steel, Gary Stevenson, testified that after receiving the citation, he had been unable to locate anyone who had received the noted letter.

Within this framework of evidence, it is clear that U.S. Steel did not receive notice of the change in the permissibility requirements for the cited longwall mining unit. Without such prior notice, there can be no violation. Accordingly, the citation is vacated."

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In *Grayned v. City of Rockford*, 408 U.S. 102, 92 S.Ct. 2294, 33 L.Ed.2d 222 (1972), the Supreme Court pointed out various reasons for withholding enforcement of vague laws, all of which I discern have applicability here:

"It is a basic principle of due process that an enactment is void for vagueness if its prohibitions are not clearly defined. Vague laws offend several important values. First, because we assume that man is free to steer between lawful and unlawful conduct, we insist that laws give the person of ordinary intelligence a reasonable opportunity to know what is prohibited, so that he may act accordingly. Vague laws may trap the innocent by not providing fair warning. Second, if arbitrary and discriminatory enforcement is to be prevented, laws must provide explicit standards for those who apply them. A vague law impermissibly delegates basic policy matters to policemen, judges, and juries for resolution on an ad hoc and subjective basis, with the attendant dangers of arbitrary and discriminatory application. Third, but related, where a vague statute "abuts upon sensitive areas of basic First Amendment freedoms," it "operates to inhibit the exercise of [those] freedoms." Uncertain meanings inevitably lead citizens to "steer far wider of the unlawful zone" . . . than if the boundaries of the forbidden areas were clearly marked."

On this record, it must be found that FMC had no warning of what constituted the conduct the Secretary contends was prohibited; FMC's contest of that aspect of the Citation charging improper, excessive cable length is found meritorious.

ORDER

Based on the foregoing findings and conclusions, FMC's contest is found to be meritorious in part. That part of Part "a" Citation No. 2009928 alleging an infraction of the manufacturer's approved design specification No. 2G2431AÄ2 because of excessive trailing cable lengths is vacated. That part of Part "a" of the Citation alleging non-compliance with 30 C.F.R. 18.35(a)(5)(ii) and a resultant violation of 30 C.F.R. 57.21Ä78, consisting of the first 3 paragraphs of the Citation and pertaining to the trip setting of the miner's short-circuit protection device, is affirmed.

Michael A. Lasher, Jr.
Administrative Law Judge

1 Part "b" of the citation was vacated by my written order herein dated July 23, 1985, after the Secretary moved for vacation at hearing (See separate transcript dated March 8, 1985).

2 This regulation provides: "Only permissible equipment maintained in permissible condition shall be used beyond the last open crosscut or in places where dangerous quantities of flammable gasses are present or may enter the air current."

3 As will be explained further subsequently, this reference number refers to the second approval (Ex. CÄ2) of the miner by appropriate government regulatory agency. The first approval for the miner/starter sled (Ex. CÄ1) was by the Bureau of Mines and was shown on the original specifications (CÄ1) which presumably accompanied the miner and sled when such were received by FMC on July 5, 1974. (Tr. 259). The second approval dated July 30, 1974, was sent to the manufacturer of the miner/sled and not to FMC. A third approval (Ex. CÄ3) which was made a part of this record applied to another miner and has no impact on the resolution of this matter (Tr. 89, 90, 108, 114).

4 A general statement of the purposes of the regulations with which Section 35(a)(5)(ii) is grouped is set forth in 30 C.F.R. 18.1, to wit:

"The regulations in this part set forth the requirements to obtain MSHA: (a) Approval of electrically operated machines and accessories intended for use in gassy mines or tunnels, (b) certification of components intended for use on or with approved machines, (c) permission to modify the design of an approved machine or certified component, (d) acceptance of flame-resistant cables, hoses, and conveyor belts, (e) sanction for use of experimental machines and accessories in gassy mines or tunnels; also, procedures for applying for such approval certification, acceptance for listing; and fees."

5 Institute of Electrical and Electronic Engineers.