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

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

v.

UNITED STATES STEEL CORPORATION,
RESPONDENT

CIVIL PENALTY PROCEEDING

DOCKET NO. LAKE 81-116-M

A/C No. 21-00282-05021 V

MINE: Minntac

UNITED STATES STEEL CORPORATION,
CONTESTANT

v.

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

CONTEST OF CITATION PROCEEDING

DOCKET NO. LAKE 81-77-R

Citation No. 293731
Issued December 29, 1980

MINE: Minntac

DECISION

APPEARANCES:

Peter D. Broitman Esq. and Janet M. Graney Esq.
Office of the Solicitor
United States Department of Labor
230 S. Dearborn Street, Eighth Floor
Chicago, Illinois 60604,
For the Petitioner

Louise Q. Symons Esq.
United States Steel Corporation
600 Grant Street
Pittsburgh, Pennsylvania 15230,
For the Respondent

Before: Judge Virgil E. Vail

STATEMENT OF THE CASE

The above two cases, which were consolidated for hearing, involve an alleged violation of section 110(a) of the Federal Mine Safety and Health

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Act of 1977 (hereinafter the "Act"), 30 U.S.C. 820(a) (Supp. 111, 1979). (FOOTNOTE 1)

Docket No. Lake 81-116-M involves a petition by the Secretary of Labor, (Secretary), for assessment of a civil penalty against respondent for an alleged violation of 30 C.F.R. 55.12-14. (FOOTNOTE 2)

Docket No. Lake 81-77-R involves a Notice of Contest filed by the respondent of Citation No. 293731 which alleged a violation of section 104(d)(1) of the Act. The Secretary filed a motion to amend its petition changing a violation of 104(d)(1) to a violation of section 104(a) of the Act, and a reduction of the proposed assessment of a penalty of \$750 to \$345. This motion was granted.

A hearing was held in Duluth, Minnesota, where the parties were represented by counsel. Post-hearing briefs were filed.

STIPULATION

The parties stipulated to the following:

1. The Administrative Law Judge has jurisdiction in this matter.
2. The inspector who issued Citation No. 293731 is and was a duly authorized representative of the Secretary.
3. U.S. Steel is a large operator within the meaning of 39 C.F.R. 100.3(b)(2)(ii).
4. Minntac, is a large mine within the meaning of 30 C.F.R. 100.3(b)(1)(ii)

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5. Joint Exhibit A (computer printout) represents a true and correct record of all violations for Minntac Mine for the period beginning January 1, 1977 and ending January 1, 1981.

6. If a violation is found, the assessment of the proposed penalty would not impair U.S. Steel's ability to remain in business.

7. Exhibit B is a true and correct copy of a safety memorandum prepared by U.S. Steel for dissemination to its employees on or about December 18, 1980.

8. The following employees manually moved the cable identified in Citation No. 293731 on December 29, 1980 without the use of protective hooks, tongs, ropes, slings, or other personal protective equipment: Eugene Varani, Mary Ellen Jaskela, Michele Heinzer, Richard Paine, Terrance Stachovich.

ISSUES

Whether respondent violated 30 C.F.R. 55.12-14, and, if so, the appropriate amount of the civil penalty which should be assessed for such violation pursuant to section 110(a) of the Act?

FINDINGS OF FACT

1. Minntac is a large taconite mine utilizing approximately fourteen drills and twenty-eight shovels in its operation. Each piece of equipment is electrically powered through a trailing cable which varies in length but averages from four to five thousand feet and sometimes reaches nine thousand feet.

2. The type of trailing cable primarily used at Minntac is U.S. Steel Tiger brand rated at 8kV (8000 volts) with a weight of approximately three pounds per foot. It is a shielded type cable incorporating three copper phase conductors each wrapped with an insulating material and encased in a braided wire mesh which in turn is in physical contact with two ground wires. There is also a separate insulated ground wire in the system that can be used as a continuous ground monitor. Minntac does not have a continuous ground monitor system in use. (FOOTNOTE 3)

3. The trailing cables attached to the various pieces of equipment run to either a substation or a meter house. The substation is a building on a platform containing a transformer and various electrical switching and metering devices capable of serving four pieces of equipment used in the mining process. In those situations where the substation does not contain OCB's (oil circuit breakers) a meter house is used to feed the electrical current to the equipment.

4. After the trailing cable is attached from its power source to the piece of equipment it is to serve and energized, the system is so designed that should a disruption or break (fault) in the electrical system occur, the current goes to the ground wire in the cable and is carried back to the meter house or substation where it trips a circuit breaker. A phase-to-ground fault will trip the circuit breaker in the meter house in one-one hundredths (.01) of a second. A second back up ground-fault tripping device located usually in the substation is set to trip in three seconds. The ground-fault system is designed to trip the circuit breakers whenever there is a leakage of 5 amps or more of current.

5. Respondent utilizes four procedures for testing trailing cables, particularly when reconnecting a trailing cable to the piece of equipment it is intended to power. After one end of the trailing cable is attached to the piece of equipment it is to power and the other end to the meter house or self-contained substation, the electrician, using a special testing transformer, will perform a high voltage test by placing more than twice the voltage on the three copper phase wires than is used in normal operations. A high current test will show if there is a fault in the cable as it will likely burn at that location. A third test, termed a continuity test, is to determine if the ground wire from the piece of equipment to the meter house is intact. The fourth test is a ground tripping test to determine that the ground-fault tripping system is working properly. (FOOTNOTE 4)

6. Respondent's employees at Minntac are assigned the task of moving trailing cables manually and in the past have done so without using protective gloves.

7. There are no recorded instances of anyone receiving an electrically caused injury from handling trailing cables at respondent's Minntac Mine since the mine started in 1967.

8. On December 18, 1980, a general safety contact was issued by respondent to its employees which stated as follows:
General Safety Contact (I.C. #18)MSHA Regulation 55.12-14

A recent interpretation of this regulation requires that insulated hooks, tongs, ropes, slings, or proper gloves be used to handle live 4160 volts or 440 volt trailing cables (shovels, drills, pumps, etc.). As rapidly as possible, we are providing this equipment for use in handling such cables.

Although this is not a company safety rule, and we feel that there is not a safety hazard with our present method of handling this type of cable, the MSHA regulation must be complied with. M. Van Deline, Superintendent - Taconite Mining. (Emphasis is that of U.S. Steel). (FOOTNOTE 5)

9. On December 29, 1980, a cable crew consisting of five of respondent's employees manually moved a trailing cable energized to a potential of 4160 volts without using hooks, tongs, ropes, slings, or the electricians gloves that had been supplied them by their employer.

10. The respondent's ground-fault system is set to trip out or disconnect at a level of five amps or more. Exposure of miners to current with amps in excess of five milliamps has a potential for injury. Miners exposure to amps between 5 milliamps and the 5 amps required to trip the ground-fault system has the potential of causing serious injury or death.

DISCUSSION

Minntac Mine is a large taconite mine utilizing approximately fourteen drills and twenty-eight shovels in its mining process. These machines are powered electrically through power cables which are also referred to as trailing cables. As a result of an inspection of Minntac Mine on December 29, 1980, Citation No. 293731 was issued charging a violation of mandatory safety standard 30 C.F.R. 55.12-14 which provides as follows:

Power cables energized to potentials in excess of 150 volts, phase-to-ground, shall not be moved with equipment unless sleds or slings, insulated from such equipment, are used. When such energized cables are moved manually, insulated hooks, tongs, ropes, or slings shall be used unless suitable protection for persons is provided by other means. This does not prohibit pulling or dragging of cable by the equipment it powers when the cable is physically attached to the equipment by suitable mechanical devices, and the cable is insulated from the equipment in conformance with other standards in this part.

At the commencement of the hearing in this case, the parties stipulated that five of respondent's employees manually moved a trailing cable which was energized to a potential in excess of 150 volts, phase-to-ground, without using insulated hooks, tongs, ropes, slings, or other personal equipment such as protective gloves which had been furnished employees for such use (Tr. Vol. 1, p. 13).

Historically, respondent's employees have been manually moving trailing cables without using protective gloves for several years prior to December 1980. Respondent has in the past relied upon a belief that the ground-fault system in the shielded power cable and four testing procedures used whenever cable is reconnected to equipment affords suitable protection by other means within the requirement of the standard for miners manually moving energized cable (Tr. Vol. 13). However, several events occurred in 1980 which prompted respondent to issue a general safety contact on December 18, 1980 providing for the use of proper gloves, in addition to other devices required by 55.12-14, whenever energized cable is moved or handled manually (Finding No. 8, supra).

The first event involved a Commission decision in the Matter of Pickards Mather and Company v. MSHA, (Case Nos. 79-MS12 and 79-MS19; September 18, 1980) which involved petitions by Hibbing Taconite and Erie Mining Company for a modification of the application of 55.12-14 wherein they argued that their ground-fault system constituted suitable protection for employees by other means. These two companies are involved in taconite mining similar to the respondent's mining operation, but did not utilize identical ground-fault system and testing procedures as that used by this respondent. The petitions for modification were denied. Based upon testimony he heard at the hearing and the decision in the Pickards Mather Case, MSHA inspector James Begley contacted respondent's management in September 1980 advising them that he intended to start issuing citations if he saw miners moving cable without wearing proper gloves (Tr. Vol. , p. 26). As indicated in the respondent's safety contact, gloves were to be provided for the employees, but as stated in the last paragraph, respondent did not feel there was a safety hazard with the present method of handling cable (Exhibit B, supra).

The issue in this case is not whether electricians gloves constitute other proper suitable protection as provided in 55.12-14 for the gloves furnished by respondent were not being used by the miners when the citation was issued. The sole issue here is whether respondent's ground-fault system and the testing procedures constitutes other means of suitable protection for persons handling energized cable within the meaning of 55.12-14. (FOOTNOTE 6)

Respondent contends that the trailing cable used at its Minntac Mine provides a ground-fault system that provides suitable protection for persons as required in 55.12-14. They point out that the cable is rated at 8000 volts whereas the cable usually only carries 4160 volt and that each of the three copper phase wires enclosed in the cable is surrounded by insulating material with a dielectric strength of 8000 volts surrounded by a braided wire mesh in physical contact with two ground wires. Respondent argues that if a fault occurs in this cable, or the equipment served by the

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cable, the current would leak to the ground wires, which conduct the current back to the meter house where it would trip the circuit breaker shutting off the current allegedly preventing an electrical shock. Respondent also contends that its four field tests performed on the trailing cable whenever it is reconnected to the equipment would reveal any fault in the cable and reveal to the electrician testing same, whether the cable is intact or damaged and whether the ground fault tripping system is working. Respondent further contends that its experience and that of other mining operators with similar ground fault systems is such that there have been no proven electrically caused injury from manually moving these trailing cables while they are energized.

A careful review of the record in this case shows that, in spite of a remarkable history of no proven electrical injuries from handling trailing cables, a potential for serious injury or death from such activities is present at all times. Phillip Medure, who is an electrician for the respondent, testified that the trailing cables at Minntac can be in service for periods of time up to nine years and are exposed to varied weather and operating conditions including extreme hot and cold temperatures, rain and snow, and various types of physical abuse including dragging the cable over rocks, snow, lying in snow and water and being run over by equipment which is a frequent occurrence. Medure stated that when the cable becomes damaged, it is usually spliced in the field with either a pipe splice or what is termed a 3M splice (Tr. Vol. 1, pages 57 to 64). The evidence is clear that the trailing cables can be damaged accidentally including cuts, slices and nicks in the rubber type material that encases the copper phase wires and ground wires.

Respondent contends that should the trailing cable be damaged severely enough to cause a leak of current, the ground-fault system will provide for the circuit breaker to trip cutting off the current. However, respondent's argument is based on the fact that the ground wire is intact and that the amount of amps to the circuit breaker is at least 5 amps for the circuit breaker is set to trip at that level or above.

I find that the most credible evidence shows that personnel exposure to amperes above five milliamps or five one thousands of an ampre can result in injury or death (Vol. I, page 119). William Helfrich, an electrical engineer experienced in electrical systems in mining testified that the ground-fault system incorporated in respondent's trailing cables is designed to protect the equipment rather than persons handling the cables. I find this evidence along with statements of other witnesses, most convincing on this point. James McNamara, respondent's field electrical foreman at Minntac testified that it was possible for damage to occur to the trailing cables due to the adverse conditions to which they are exposed and that a person coming in contact with this type of damage could be injured (Vol. 2, pages 27 and 28). Frank Erjavec, respondent's General Foreman for pit electrical operations, testified that if the system were intact, a person touching the shield in the cable would not feel anything

~FOOTNOTE_ONE

Section 110(a) of the Act provides as follows:

The operator of a coal or other mine in which a violation occurs of a mandatory health or safety standard or who violates any other provision of this Act, shall be assessed a civil penalty by the Secretary which penalty shall not be more than \$10,000 for each such violation. Each occurrence of a violation of a mandatory health or safety standard may constitute a separate offense.

~FOOTNOTE_TWO

30 C.F.R. 55.12-14 states in pertinent parts as follows:

. . . When such energized cables are moved manually, insulated hooks, tongs, ropes, or slings shall be used unless suitable protection for personnel is provided by other means

. . . .

- 3 Joint Exhibit C.
- 4 Exhibit R-4.
- 5 Joint Exhibit B.
- 6 Respondent's Brief, page 5.