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Federal Mine Safety and Health Review Commission
Office of Administrative Law Judges

UNITED STATES STEEL CORPORATION,
CONTESTANT

v.

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

CONTEST OF CITATION PROCEEDING

DOCKET NO. WEST 80-386-R

MSHA Order No. 339479

Mine: Atlantic City Ore Operation

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

v.

UNITED STATES STEEL CORPORATION,
RESPONDENT

CIVIL PENALTY PROCEEDINGS

DOCKET NO. WEST 81-58-M

MSHA Case No. 48-00145-05014

DOCKET NO. WEST 80-160-M

MSHA Case No. 48-00145-05008 H

Mine: Atlantic City Ore Operation

DECISION AND ORDER

APPEARANCES:

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For the Petitioner

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For the Respondent

Before: Judge Jon D. Boltz

STATEMENT OF THE CASE

Pursuant to the provisions of the Federal Mine Safety and Health Act of 1977 (hereinafter the "Act"), United States Steel Corporation (hereinafter "USS") was issued Citation No. 338867 on May 15, 1979. (Case No.

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WEST 80-160-M). A violation of 30 CFR 55.12-14 (FOOTNOTE 1) was alleged. The citation stated that the high voltage power cable to the No. 4 shovel was being moved by hand. No protective equipment or personal protection was used.

On June 12, 1980, Citation No. 339479 was issued alleging a violation of the same regulation. Specifically the citation stated ". . . an employee was observed handling an energized 4,160 volt power cable to company drill #6. The employee was wearing leather gloves only." In connection with this citation USS timely filed a "Notice of Contest." (Case WEST 80-386-R). Subsequently, the Secretary filed a "Proposal for Penalty" for the alleged violation (Case No. WEST 81-58-M).

On both Citations "Order of Withdrawal" was designated pursuant to section 107(a) (FOOTNOTE 2) of the Act, and the violations were designated as "significant and substantial." By Order dated October 7, 1981, the above three cases were consolidated for hearing.

At the commencement of the hearing counsel for the Secretary withdrew the section 107(a) Withdrawal Order allegation in connection with Citation No. 339479. USS had no objection, but argued that the section 107(a) withdrawal order designation in Citation 338867 was still a valid issue. However, USS had not filed an application for review of the withdrawal order designated in that Citation. Commission Procedural Rule 21 requires that the application for review be filed within 30 days of receipt of the order by the applicant.

I find that there was no prejudice to USS in that the Secretary elected not to proceed on the withdrawal order designation on either citation. In Citation No. 338867, Case No. WEST 80-160-M, an application for review of the order was not timely filed by USS pursuant to Procedural Rule 21. In Citation No. 339479, the subject of the "Notice of Contest", Case No. WEST 80-386-R, and also the proposal for penalty, WEST 81-58-M, the withdrawal order was not an issue because USS had no objection to the Secretary withdrawing that designation prior to the hearing.

Counsel for the Secretary elected to present evidence only on the alleged violations of the cited regulation and proposed penalties in cases No. WEST 80-160-M and WEST 81-58-M.

FINDINGS OF FACT

1. Atlantic City Ore Operations is large. It employs 530 employees and there are three working shifts daily. The imposition of proposed penalties will not affect Respondents ability to continue in business.

2. USS had 112 assessed violations in the preceding two year period at its Atlantic City Ore Operations, and this is average for an operation of that size.

3. Approximately four drills and eight shovels which are electrically powered through trailing cables are used in daily operations at the Atlantic City Ore Operation.

4. As the equipment is in operation, the trailing cables which weigh approximately 2.2 pounds per foot are moved manually by crews of laborers and Pit utility men on a regular basis.

5. The trailing cables which are approximately two and a half inches in diameter are rated at 5,000 volts although they ordinarily carry 4,160 volts of electricity. The cables consist of three copper phase wires encased by a braided wire mesh which in turn is in physical contact with the two ground wires. There is also a separate insulated ground wire in the system that can be used as a continuous ground monitor, although the Atlantic Ore Operation does not have a continuous ground monitor system in use.

6. The trailing cables attached to the equipment run to a switch house, one for each unit. If there is a disruption or break in the electrical system and current is carried on the ground wire, the current will follow the ground wire back to the switch house and substation and trip a circuit breaker. The resistor limits the ground fault to a maximum of approximately 25 amps, however, 4 amps of current is sufficient to open the circuit and stop the flow of electricity to the machinery.

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7. The current must run through the ground fault system to the breaker for approximately one second in order for the breaker to trip and shut off the electrical power running to the equipment.

8. Current of less than one amp can seriously injure or electrocute a person.

DISCUSSION

Before each citation was issued an MSHA inspector had observed a miner manually moving trailing cable without the use of insulated hooks, tongs, ropes, or slings. Thus, there was a violation of the cited regulation "unless suitable protection for persons is provided by other means." USS utilized a ground fault tripping system built into the trailing cable, and the Secretary contends that this system is not "suitable protection" within the requirements of the cited regulation. The Secretary also contends that the ground fault tripping system does not protect miners but was designed to protect equipment.

It was undisputed that the current needed to trip the breaker switch is more than is necessary to seriously injure or kill a person. A phase to phase fault was described as an occurrence when the current flows from one conductor wire to another in the trailing cable. A phase to ground fault is the passage of electricity from the conductor wire to the ground wire. If the ground wire is interrupted, broken, cut or severed for some reason, there is no effect on the breaker at the switch house. Thus, even though the ground fault system depends on the ground being connected at all times in order to trip the breaker, under some circumstances the system would not offer that protection. Once the stray current has reached the metal shielding outside of the cable and inside the jacket of the trailing cable, the current can be conducted down the entire length of the cable endangering anyone who might touch it without protective equipment required by the regulation. Damage to the cable can exist in the form of pin hole leaks which cannot be detected by eye.

The trailing cable can accidentally be damaged. They are subject to adverse weather and operating conditions. The evidence showed that the cables sometimes get frozen into snow banks and are chipped loose with picks or shovels. They are sometimes run over by heavy equipment, and they are subject to tension by the machinery dragging them over rocks and ridges. Heavy rocks may fall on them from higher in the open pit.

An electrician for USS testified that the ground faults system is designed to protect the equipment powered by the trailing cable and is not designed to protect persons who handle the cables. I find this evidence, along with the statements of other witnesses, convincing on that point,

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even though the assistant superintendent of maintenance testified that this was not the case. The electrician also testified "I have seen cables that had a fault and blown a hole in the jacket. The switch house has failed to trip and you can see current carrying conductors [wires] visible."

There are five to six miles of trailing cable in the open pit mine which must be energized when the drills and shovels are operating. A cable can be up to three quarters of a mile in length and have as many as 15 splices every 500 to 700 feet. At one time there were over 500 splices in the entire length of cable. Generally, a splice is applied where leakage of current has occurred due to damage. An MSHA inspector discovered five defective splices in one day's inspection at the mine. This condition presented a hazard to miners who manually moved the cable.

The assistant superintendent of maintenance for USS testified that the ground fault system depended on the ground being connected for the system to perform properly. However, loss of ground continuity can occur in the system and the breaker at the switch house would not "trip". The current needed to trip the switch house or to interrupt the current can be more than the amount required to injure or kill a person. The evidence shows that a miner may be exposed to more than one amp of current for a period of approximately one second, which is sufficient to seriously injure or kill him if he comes into contact with the cable with his bare hands. Although one miner was observed wearing leather gloves while handling the cable, there was no evidence produced to show that these gloves provided "suitable protection." The Citation No. 338867 was terminated by the inspector after USS obtained electrical hazard gloves for use by the cable handlers.

I also find the testimony of the electrical engineer called to testify for the Secretary to be credible. He testified that possible injuries which could result from bare hand touching of a trailing cable which is leaking current of less than one amp could result in severe physical harm or death. Although a miner cannot be expected to be provided work in a completely risk free environment, the evidence is convincing that when the energized power cables are moved manually the ground fault system is not suitable protection from the electrical hazards provided by means other than insulated hooks, tongs, ropes, or slings as called for in the cited regulation.

I find that the designation of "significant and substantial" in connection with the gravity of the violations was proper. This conclusion is based on the principles set forth in Secretary of Labor v. Cement Division, National Gypsum Company, 3 FMSHRC 822 (1981), as follows:

". . . A violation is of such a nature as could significantly and substantially contribute to the cause and effect of a mine safety or health hazard if, based upon the particular facts surrounding that violation,

there exists a reasonable likelihood that the hazard contributed to will result in an injury or illness of a reasonably serious nature."

