

FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

OFFICE OF ADMINISTRATIVE LAW JUDGES
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April 8, 1998

BLUE CIRCLE, INC.,	:	CONTEST PROCEEDING
Contestant	:	
v.	:	Docket No. CENT 97-181-RM
	:	Citation No. 7855639; 4/2/97
SECRETARY OF LABOR,	:	Modified 7/22/97
MINE SAFETY AND HEALTH	:	
ADMINISTRATION (MSHA),	:	Tulsa Plant
Respondent	:	Mine ID No. 34-00026

DECISION

Appearances: Greg Ruffennach, Esq., Ruffennach Law Offices, Durango, Colorado, for the Contestant;
Mary Schopmeyer, Esq., Suzanne Dunne, Esq., U.S. Department of Labor, Office of the Solicitor, Dallas, Texas, for the Respondent.

Before: Judge Bulluck

This case is before me on a Notice of Contest filed by Blue Circle, Inc. (Blue Circle) against the Secretary of Labor, acting through her Mine Safety and Health Administration (MSHA), pursuant to section 105 of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. ' 801 et seq. (Mine Act), in which Blue Circle challenges a citation that it was issued under section 104(a) of the Act.

A hearing was held in Tulsa, Oklahoma and the parties submitted post-hearing briefs. For the reasons set forth below, the citation shall be affirmed.

I. Stipulations

The parties stipulated to the following facts:

1. The Contestant is subject to the jurisdiction of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. ' 801 et seq. (Mine Act).
2. The presiding Administrative Law Judge has jurisdiction to hear and decide this matter.
3. The subject citation, as well as the amended citation, were properly issued and served by a duly authorized representative of the Secretary of Labor, Mine Safety and Health Administration, upon an agent of the Contestant on the date and place stated therein.
4. The Contestant has filed a timely notice of contest.

5. The abatement period, should this violation be upheld by this Court, shall be eight weeks from the date of the Court's decision.

II. Factual Background

Blue Circle operates a limestone quarry and cement plant near Tulsa, Oklahoma. The limestone is mined on site and transported overland to a bulk storage facility where two overhead cranes (ANo. 1 crane and ANo. 2 crane), traveling the length of the main bay on the same set of rails at varying speeds ranging from slow to very fast, pick up and dump rock and other bulk materials into large hoppers (Tr. 103-104, 184; Ex. R-3). Located at the end of the rails are large, 3 x 4 feet metal bumpers (end-stops), designed to prevent the wheels from derailing and causing the crane to fall some 60 feet to the ground (Tr. 25, 32, 44). One end of the building is enclosed, while the other end is completely open to the outside (Tr. 44, 80).

While similar in basic design, the cranes were manufactured by different companies (Tr. 13).¹ Each crane consists of a bridge that spans the east-west distance between the parallel rails, and runs north and south to the ends of the building (Tr. 25, 75, 132, 182). Suspended from each bridge near the center is a stationary, glass enclosed, operator's cab (Tr. 13, 26, 52, 161), as well as a trolley that travels east and west on girders affixed to and above the bridge (Tr. 13, 53-54, 182-183). The trolley supports two hoists that lift and lower a clamshell bucket, which moves the bulk materials (Tr. 13, 182). The motion of the bridge, the trolley and the bucket is controlled by use of levers located within the cab (Tr. 102-103, 184; see Ex. C-4).

The No. 1 crane, newer in design, is equipped with a hydraulic braking system, whereby its drum brake is applied by a foot pedal during operation of the crane (service brake), or by application of a console switch, which sets the brake in a parking mode (emergency brake) (Tr. 167). The No. 2 crane was originally manufactured so that its drum brake could be activated by a hydraulic foot pedal located in the cab (service brake) (Tr. 16, 65, 165-166, 177), or by electrical means when the operator pulled a lever located behind his chair, which would disconnect power to the entire crane, as well (emergency brake) (Tr. 14, 131, 137, 164-166). The crane has four motors: a motor to drive the bridge; a motor to drive the trolley; and two motors controlling hoist motion--one for holding the clamshell bucket and the other for opening/closing the bucket (Tr. 181-182).

Sometime around late 1989/early 1990, Blue Circle made modifications to the No. 2 crane, which included reconfiguring the cab by installation of a new operator's swivel chair and two emergency-stop buttons (one on either side of the operator's chair), and removal of the hydraulic foot pedal (Tr. 14, 139, 168-169, 171-173). At some earlier time, the actual hydraulic

¹Harnishfeger Industries, Incorporated, using the trade name AP&H on some of its equipment, is the manufacturer of the No. 2 crane.

mechanism had been removed from the crane (Tr. 172). As a consequence of these modifications, the crane has been operated without a service brake and the sole means of activating the friction emergency/parking brake has been by pressing either of the emergency-stop buttons (Tr. 14). Since engaging the emergency brake shuts off the power to the entire crane, this violent method of stopping is reserved for emergency situations only (Tr. 20-22, 28, 130, 162-164, 189).

In order to stop the No. 2 crane during the normal course of operations, the operators use a slowing method or braking means referred to as plugging, whereby reversing the bridge motor's torque to create a magnetic field in the direction opposite of that in which the motor is running, creates friction on the wheels by the back and forth movement, until the crane comes to a stop (Tr. 15, 70-71, 81, 194).

On April 2, 1997, MSHA Inspector Don Richards conducted an electrical inspection of the Tulsa plant, pursuant to a hazard complaint (unrelated to the operation of the crane) (Tr. 47-49). Upon his arrival, he was met by Blue Circle's safety representative Jerry Dean, who, based on safety concerns, directed the inspector's attention to the No. 2 crane (Tr. 12). During his inspection of the No. 2 crane, Inspector Richards discovered, among other things, the removal of the hydraulic foot pedal and the installation of the two emergency-stop buttons (Tr. 14). Inspector Richards then interviewed two crane operators, traveled in the crane with an operator, and conducted motion/stop tests (Tr. 14, 16, 18-20, 25-26, 28, 40). Based on his observations, interviews and test results, Inspector Richards issued section 104(a) citation No. 7855639 to Blue Circle on that day, alleging a significant and substantial violation of 30 C.F.R. ' 56.14101(a)(3) [later modified on July 22nd to allege a violation of ' 56.14100(b)], describing the violation as follows:

The overhead, rail mounted, #2 clamshell crane, located in the south crane storage building, was observed operating without the factory equipped foot brake that had been originally installed on it. The brake was removed some months ago and no provision was made to install another brake. The crane is now stopped by plugging the drive motor. There are two cranes that operate in the south crane storage building on the same rail at the same time. They work in close proximity daily and the lack of a foot brake, as a means of stopping the crane, increases the possibility of an accident or injury. The other crane has its foot brake intact and operational (Ex. R-1).

III. Findings of Fact and Conclusions of Law

A. Fact of Violation

30 C.F.R. ' 56.14100(b) provides that: Defects on any equipment, machinery, and tools that affect safety shall be corrected in a timely manner to prevent the creation of a hazard to persons. The seminal issue for resolution, then, is whether removal of the manufacturer-installed hydraulic service brake on the P&H No. 2 crane constitutes a defect that affects safety.

In discussing the broad applicability of the generally worded predecessor regulation,² the Commission has emphasized that the standard must be construed in consonance with the fundamental protective ends of the Mine Act, so that the integrity of a machine is not defined solely by its proper functional performance but must also be related to the protection of miners' health and safety. *Ideal Cement Co.*, 12 FMSHRC 2409, 2414-15 (November 1990) (*Ideal I*).

1. Defect

In order to establish a violation of this regulation, the Secretary must establish that 1) there was a defect in the No. 2 overhead crane; 2) the defect affected safety; and 3) the defect was not corrected in a timely manner to prevent the creation of a hazard. Respecting the first element of this analysis, the Commission has previously adhered to the ordinary and mining industry usage of the term "defect" as a fault, a deficiency, or a condition impairing the usefulness of an object or a part. *Webster's Third New International Dictionary (Unabridged)* 591 (1971); U.S. Department of Interior, Bureau of Mines, *A Dictionary of Mining, Mineral and Related Terms* 307 (1968). *Allied Chemical Corporation*, 6 FMSHRC 1854, 1857 (August 1984). Moreover, the Commission has held that a missing, as well as a defective component, may constitute an equipment defect, and the defect or missing component need not affect the operation of the equipment. 12 FMSHRC 2415; 6 FMSHRC 1857. In the instant case, there is no dispute that the missing hydraulic service brake on the No. 2 crane constitutes a "defect" within the meaning of the regulation, Blue Circle concedes this point, and I so conclude (C. Br. at 9).

2. Affects Safety

The parties are in dispute, however, as to whether the defect affects safety. Respecting this element, the Commission has repeatedly stated that the phrase "affecting safety" in the standard has a wide reach and the "safety effect" of an uncorrected equipment defect need not be major or immediate to come within that reach. *Ideal Cement Co.*, 13 FMSHRC 1346, 1350 (September 1991) (*Ideal II*), citing *Ideal I*, 12 FMSHRC 2415, citing *Allied Chemical Corp.*, 6 FMSHRC 1854, 1858. Recognizing that adequate notice of the conduct prohibited by the regulation must be accorded to the operator, the Commission has required that the evidence be evaluated in light of what a reasonably prudent person, familiar with the mining industry and the protective purpose of the standard, would have provided in order to meet the protection intended by the standard. 12 FMSHRC 2415, 2416, citing *Canon Coal Co.*, 9 FMSHRC 667, 668 (April 1987); *Quinland Coal, Inc.*, 9 FMSHRC 1614, 1617-18 (September 1987). The Commission has provided further guidance on application of this objective test by recognizing that the various factors that bear upon what a reasonable person would do include safety standards in the field,

²30 C.F.R. § 56.9002 (1987) provided that: "Equipment defects affecting safety shall be corrected before the equipment is used."

considerations unique to the mining industry, and the circumstances at the operator's mine. @ *BHP Minerals International Inc.*, 18 FMSHRC 1342, 1345 (August 1996), citing *U.S. Steel Corp.*, 5 FMSHRC 3, 5 (January 1983).

The Commission, in *Ideal I*, has provided a practical framework in which to make such analysis, by specifying categories of evidence to be examined in the context of the modified condition in which the equipment was being used. Within that framework, in the instant case, it is appropriate to examine, at least, the following evidence: 1) the testimony of Blue Circle employees and the inspectors regarding whether operating the No. 2 crane without the hydraulic service brake affects safety; 2) any evidence of whether the presence of the hydraulic foot pedal impeded the equipment operators' use of the equipment; 3) any evidence of whether the operator's safety policies prohibited removal of the hydraulic service brake; and 4) any evidence of industry or manufacturer's policy on removal of the hydraulic service brake and the circumstances, if any, under which it could be removed without impairing safety. See 12 FMSHRC 2416.

The Secretary takes the position that, irrespective of the No. 2 crane's ability to stop/perform within national industry standards, removal of the hydraulic service brake poses a hazard to miners' safety (R. Br. at 4). Blue Circle, on the contrary, contends that removal of the hydraulic service brake does not adversely affect safety, since the crane meets national safety standards and Occupational Health and Safety Administration (OSHA) regulations, and the crane can be stopped safely under both normal and emergency conditions. Moreover, Blue Circle asserts that it has been denied fair notice (C. Br. at 7-8).

Inspector Donald Richards testified to having interviewed two crane operators who related having experienced numerous electrical problems on the No. 2 crane (blown fuses, wires burned off of connections, and power failure to the motor), and who attributed the inability to hold the crane in one place by plugging, as the cause of collisions between the clamshell bucket and the cab, knocking off the end-stops, and near-derailments (Tr. 16-17, 19, 24-26, 43). He further testified to having been told of the confusion experienced by new operators, caused by having to switch between the No. 1 and 2 cranes, with differing braking configurations (Tr. 19-20). Moreover, he stated that when he had an operator demonstrate plugging on the No. 2 crane, by running it from one end of the building to the other at high speed, the violent jumping and vibrating that occurred, accompanied by tremendous noise, stressed everything on it (Tr. 18, 40). In this regard, the inspector explained that, while pulling and lifting functions usually cause stress cracks on cranes, violent motion worsens these cracks which, taken to the extreme, have resulted in derailment and, ultimately, death (Tr. 19, 23-24). Additionally, Inspector Richards characterized employment of the emergency brake for stopping, as a last ditch effort, because of its very violent nature and, due to disconnection of all power, because it deprives the operator of all control (Tr. 20-22). In his opinion, operating the crane without the availability of the hydraulic service brake poses a safety hazard, by depriving the operator of a means of immediate stopping that does not kill the power to the crane completely. He reasoned that plugging is a slowing, rather than braking function, which requires estimates based on speed and weight of load, it

neither enables the operator to hold the crane nor does it aid in checking the swing of the bucket when the operator has to stop suddenly; more importantly, in situations of total power failure and/or emergency brake failure, it renders the operator powerless, without any brake at all (Tr. 18, 27-28, 29-32). While Inspector Richards conceded that the crane stopped within OSHA guidelines,³ he testified that the hydraulic service brake is necessary for safe operation of the crane, nevertheless, especially in light of the close proximity in which the cranes operate on the same rails, and since they have already collided (Tr. 38-42).

MSHA Inspector Stephen Dubina, an expert in electrical engineering, performed an inspection of the No. 2 crane on August 12, 1997, which included visual inspection, stop-testing using the emergency brake, and interview of crane operators (Tr. 64; see Ex. R-3). Inspector Dubina testified that, notwithstanding the fact that the crane stopped within CMAA guidelines using the emergency brake and held the crane in place (Tr. 66-67, 83, 88),⁴ the bucket swung radically (Tr. 83), the crane jerked violently and you could hear the grinding and other bad things happening inside the gear cases, so that it's not a thing that you want to stop the bridge every time using that parking brake@ (Tr. 89-90). Plugging is an ineffective braking method, he explained, because it slows the conveyance, rather than holding it in a specific spot or bringing it to an immediate stop (Tr. 66-67, 69, 81-82, 86). While the inspector asserted that plugging is the accepted stopping means used in the industry during anticipated movement, he opined that during unanticipated movement of a crane (caused by wind, vibrations, or tilted rails, for example), there exists the potential for injury and the ability to hold the crane in place is crucial (Tr. 78-80, 84, 94, 96-99). The ability to hold the bridge in place is also crucial to picking up and dumping loads, he noted, in which case use of the emergency brake is essentially prohibitive because it cuts off all power to the crane (Tr. 91). He also stated that the operators expressed concerns about plugging failures in which they were unable to stop until friction actually stopped the crane or it hit something, and about new operators having difficulty switching between operating the two cranes (Tr. 68, 72-73).

The Secretary presented compelling testimony of several Blue Circle employees who have operated or serviced the No.2 crane within the last decade. Jerry Pardue, a 26 year employee and

³Judicial notice was taken of applicable OSHA regulations at the hearing (Tr. 207; see Ex. C-2). Blue Circle concedes that MSHA is not bound by OSHA regulations (Tr. 199; C. Br. at 13, n. 11).

⁴CMAA (Crane Manufacturers of America) is a trade association with an engineering committee that writes design (industry) standards for overhead cranes (Tr. 178; Ex. R-4).

crane operator from July 1995 to July 1996 (Tr. 117), testified that, due to loss of control more than a dozen times from power failure and/or emergency brake failure, he had collided with the other crane, run into the end-stops, and on one occasion when he had gone on vacation, the relief operator had knocked out all the cab windows with the bucket (Tr. 105-106, 108, 111-112). Pardue asserted that, because Blue Circle did not reinstall the hydraulic service brake as he had requested, after these incidents had been reported and Pardue had removed the crane from service for approximately two weeks, he refused to operate the crane without the brake and ultimately changed jobs in mid-summer 1996 (Tr. 108-113).

25-year employee Jerold Emerson, a crane operator for 3 years (primarily on the No. 2 crane for 12 years) (Tr. 119, 127), testified that he experiences electrical failures in the cab on an average of 1 to 2 times per week, that he has had the bucket kiss the cab, that depressing the emergency-stop button causes dust to fly everywhere and loss of control of the swinging bucket, that it is difficult to hold the crane in one position by plugging, that 2 of the crane operators are rookies and have problems switching between the cranes, and that plugging involves guesswork as to where the crane will stop (Tr.120-125). Additionally, he expressed his belief that an operator is better able to predict where the crane will stop by using the hydraulic service brake than with plugging, and the hydraulic service brake provides a means of stopping in situations where both plugging and the emergency brake fail (Tr. 123, 127).

David Ford, an employee of 19 years, currently an electrician who services the cranes and formerly a vacation relief operator for 82 years (Tr. 129), testified to experiencing both plugging and emergency brake failure, having accidents in which he knocked the end-stops off the building and the crane almost derailed (Tr. 131-132), being thrown about the cab and suffering injury resulting in a 5% back disability (Tr. 130), and having another worker riding the bridge when one of the accidents occurred (Tr. 132-133, 138). Further, he explained that since the trolley is routinely serviced by workers standing atop the bridge, which is like a big sail in the wind, it will move, it is necessary to for an operator to have a safe means of holding the bridge in place from the cab (Tr. 142). Moreover, Ford asserted that the hydraulic service brake permits compensation for overestimates in plugging, that because the two cranes work in close proximity to each other, it is necessary to have a second method of stopping, and that production supervisor Don Jones instructed him to rely on plugging and the hydraulic service brake to stop (Tr. 134-136).

Jerry Dean, 25-year employee and former miners' union representative, testified to having received complaints from workers about unsafe conditions on the No. 2 crane, including inability to stop during power failures, and lack of control over the swing of the bucket during plugging (Tr. 144-147). Furthermore, he stated that he had reported these complaints to management (Tr. 147).

Blue Circle presented the testimony of utility supervisor Ronald Glover, a 23 year employee and former operator of the No. 2 crane in or around 1966, when it was relatively new and long before the hydraulic service brake was removed (Tr. 152-153, 155). Glover opined that

removal of the hydraulic service brake did not affect safe operation of the crane (Tr. 153). He admitted, however, that he had never used the emergency-stop, nor had he experienced plugging failure (Tr. 154).

In considering the next category, whether the hydraulic service brake impeded the operators' ability to operate the crane, the evidence establishes that the hydraulic service brake was removed due to frequent leaks of hydraulic fluid (Tr. 138-139, 171). While James Kriel, senior electrical engineer at Blue Circle, testified on behalf of Blue Circle that the hydraulic foot pedal was in the way of the swivel chair that had been installed when the cab was modified (the hydraulic brake mechanism had been removed previously), there is no evidence that the foot pedal obstructed safe and comfortable operation of the controls (See Tr. 168-169).

The third category of evidence in considering whether safety is affected is whether the operators' safety policies prohibited removal of the hydraulic service brake. James Kriel also testified that he was unaware of who had made the decision to remove the hydraulic brake mechanism previously or whether Harnischfeger had been consulted, but that it was he who had made the decision to remove the hydraulic foot pedal from the cab (Tr. 172). He asserted that safety was not a concern, since the hydraulic system had been unreliable, removal did not degrade the ability to stop by plugging under normal operating conditions, and an emergency-stop system was available in adverse situations (Tr. 169, 171-172).

In considering the fourth category, industry or manufacturer's policy on removal of the hydraulic service brake, 19-year employee Gary Burch, a maintenance welder and console operator, provided credible and unchallenged testimony for the Secretary on this issue. Burch stated that he had received a week of training on the No. 2 crane in late 1996/early 1997, and that in response to the question of whether the hydraulic service brake should have been removed, the instructor, a representative of Harnischfeger Industries, responded that they're not supposed to do away with anything that was manufactured on the crane that has to do with the operation or the safety on it (Tr. 149-150). Burch also stated that he had related this information to Blue Circle's safety and maintenance departments (Tr. 150). Moreover, Inspector Richards testified that, of the overhead cranes he had inspected, none but the No. 2 crane had had the hydraulic service brake removed (Tr. 49). Andrew Toth, Blue Circle's expert, testified that he would not recommend removal of hydraulic service brakes on cranes similar to the No. 2 crane as a general practice, since there are applications where it's advantageous to use the hydraulic brake for accurate positioning (Tr. 215-216). Harnischfeger's letter of April 18, 1996, to Blue Circle does not address the circumstances under which the hydraulic service brake could be removed without compromising safety, but suggests how the P&H No. 2 crane, in its modified configuration, could fulfill OSHA requirements. While Harnischfeger noted that new P&H cranes are equipped with adjustable frequency electrical controls (designed to automatically brake them without the use of foot applied brakes) and parking/emergency brakes, it is clear from the record that the No. 2 crane is not equipped with this technology (See Ex. R-3 at 8-9).

Andrew Toth, a retired 35-year employee of Harnischfeger, designed assemblies for overhead cranes and hoists (Tr. 176-177). Pursuant to Blue Circle's request that he examine the

No. 2 crane, Toth rode in the cab with the operator (without a load) in order to test the crane's braking means and systems (Tr. 185, 208; see also Ex. C-1). He testified that, according to his test measurements, the crane stopped within industry and OSHA standards when plugged, as well as when the emergency brake was employed (Tr. 186-188, 198-201).⁵ He noted, however, that while the crane stopped smoothly when plugged, the stopping action associated with the emergency brake was violent (Tr. 189). He asserted, therefore, that the emergency-stop system should be utilized only when all else fails (Tr. 189). In his testimony, Mr. Toth also emphasized the pervasive use of plugging in the industry, as an accepted braking means on bridge and trolley motions (Tr. 190). Although he concluded that the crane is meant to be plugged and that removal of the hydraulic service brake does not affect safety, he acknowledged that, during his observation, the operator was unable to hold the crane in position, nor did he, Toth, observe any tract clamps or other hold-down devices, which he had referenced in his testimony as alternative holding means (Tr. 202, 205-211; see Ex. C-1). Moreover, Mr. Toth stated that he only talked to the operator on duty, and that he did not ask his opinion as to whether the missing brake posed a safety problem (Tr. 209).

It is important to note, at this juncture, that all of the witnesses were credible, and gave clear and concise accounts of their experiences which, with minor exceptions, were unrebutted. Based on the personal accounts of power failures, accidents and near-misses by the operators, notwithstanding the ability of the crane to stop within industry and OSHA guidelines, it is clear that there are times when the ability to hold the crane is crucial. James Kriel even acknowledged that hydraulic brakes were designed from an operational point, to allow you to precisely maneuver the crane to an exact point (Tr. 174). The evidence of record is overwhelmingly contrary to his conclusion, however, that in our operation, we don't have to precisely maneuver it to an exact point (Tr. 174). While Blue Circle seeks to minimize the personal accounts of those crane operators whose very lives have been placed on the line by diminished to non-existent ability to stop and/or control the crane, their cumulative testimony, when considered in conjunction with the enormity of the crane, its suspension on the rails and tandem operation with the other crane, establishes the need for the highest degree of maneuverability that is technologically possible, as opposed to reduction of any safety devices that have already been provided for that purpose. Moreover, the record is replete with credible accounts of power failures and failed systems that have left the miners to the mercy of the crane coasting to a stop on

⁵Judicial notice taken of applicable ASME (American Society of Mechanical Engineers) standards at the hearing (Tr. 207). ASME is a professional association of manufacturers, users and other interested parties that writes consensus (safety) standards in performance language which, after distribution and comment under procedures accredited by the American National Standards Institute (ANSI), become American National Standards (Tr. 178-179; Ex. C-3).

its own. For all the obvious reasons that it is unfathomable that an automobile driver lack control of his vehicle in any aspect of its operation, on a larger scale, it is all the more obvious that a crane operator must be provided with all available means of controlling this enormous machinery, especially when life and limb are in jeopardy (See Tr. 21, 69-71). To the extent that Blue Circle has premised its position solely on the functional performance of the crane in terms of industry standards, it has neglected to duly consider the electrical system and/or emergency brake failures which have already occurred and cannot be ruled out in the future, and, therefore, it has failed to prioritize the safety of the miners, as required by the standard. By so doing, it has deprived them of the enhanced protection that the hydraulic service brake was designed to provide. I am persuaded that plugging is generally accepted in the industry as the preferred stopping means under normal conditions, but I am equally persuaded that, under extraordinary circumstances, the emergency brake alone (stressing the crane and non-performing on occasion) does not provide the level of protection that was envisioned by the original design of the crane. I find, therefore, that removal of the hydraulic service brake comes within the ambit of the wide reach covered by ' 56.14100(b), and is a defect affecting safety.

3. Timely Correction

Respecting the last element in establishing a violation, whether the defect was corrected in a timely manner, it is a matter of record that Blue Circle has not attempted to replace the hydraulic service brake, nor has any intention of doing so. Accordingly, I find that the safety defect was not corrected in a timely manner.

4. Conclusion

Section 56.1 of the regulations, 30 C.F.R. ' 56.1 makes known that: The purpose of these standards is the protection of life, the promotion of health and safety, and the prevention of accidents. If Blue Circle was unaware of the necessity of the maintaining the hydraulic service brake on the crane at the time it elected to remove it, it certainly became aware that the brake should be reinstalled when the operators reported the power failures, emergency brake failures and accidents, and when Jerry Pardue removed the crane from service. I find that a reasonably prudent person, familiar with the mining industry and the purpose of the regulations, would have reinstalled the hydraulic service brake on the No. 2 crane, at least, immediately after Jerry Pardue reported the simultaneous plugging/emergency brake failure, or while it was red-tagged by Pardue for two weeks to prevent future accidents, such as those that have caused David Ford's back disability and the Missouri fatality referenced by Inspector Richards in his testimony (Tr. 19). Therefore, I conclude that Blue Circle violated section 56.14100(b) of the regulations.

B. Significant and Substantial

Section 104(d) of the Mine Act designates a violation significant and substantial (S&S) when it is of such a nature as could significantly and substantially contribute to the cause and effect of a coal or other mine safety or health hazard. A violation is properly designated S&S if,

based upon the particular facts surrounding the violation, there exists a reasonable likelihood that the hazard contributed to will result in an injury or illness of a reasonably serious nature.@ *Cement Division, National Gypsum Co.*, 3 FMSHRC 822, 825 (April 1981).

In *Mathies Coal Co.*, 6 FMSHRC 1, 3-4 (January 1984), the Commission set forth the four criteria that the Secretary must establish in order to prove that a violation is S&S under *National Gypsum*: 1) the underlying violation of a mandatory safety standard; 2) a discrete safety hazard--that is, a measure of danger to safety--contributed to by the violation; 3) a reasonable likelihood that the hazard contributed to will result in an injury; and 4) a reasonable likelihood that the injury in question will be of a reasonably serious nature. See also *Buck Creek Coal, Inc. v. FMSHRC*, 52 F.3d 133, 135 (7th Cir. 1995); *Austin Power, Inc. v. Secretary*, 861 F.2d 99, 103-104 (5th Cir. 1998), *aff=* 9 FMSHRC 2015, 2021 (December 1987) (approving *Mathies* criteria. Evaluation of the third criterion, the reasonable likelihood of injury , should be made in the context of Acontinued mining operations.@ *U.S. Steel Mining Co.*, 6 FMSHRC 1573, 1574 (July 1998). Moreover, resolution of whether a violation is S&S must be based Aon the particular facts surrounding the violation.@ *Texasgulf, Inc.*, 10 FMSHRC 498, 501 (April 1988).

Inspector Richards found the violation to be S&S. He testified that he had determined it Areasonably likely@that an injury would occur, based on information that he had received from the crane operators that they had already had incidents of a broken light and knocked off end-stops due to inability to stop, and that such injury would result in Alost workdays or restricted duty,@ since the crane operators, without seatbelts, could be thrown about the enclosed metal cab (Tr. 26-27). I find, based upon the evidence, that there was a reasonable likelihood that collision with the other crane or the end-stops, and/or collision between the bucket and cab, contributed to by the removal of the hydraulic service brake, would result in an injury of a reasonably serious nature. Therefore, I conclude that the violation was Asignificant and substantial.@

ORDER

Accordingly, Citation No. 7855639 is hereby **AFFIRMED**, and this Contest Proceeding is **DISMISSED**.

Jacqueline R. Bulluck
Administrative Law Judge

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