FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

OFFICE OF ADMINISTRATIVE LAW JUDGES
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Washington, D.C. 20001

May 3, 2011

SECRETARY OF LABOR,	:	CIVIL PENALTY PROCEEDINGS
MINE SAFETY AND HEALTH	:	
ADMINISTRATION (MSHA),	:	Docket No. WEVA 2006-853
Petitioner	:	A.C. No. 46-08791-090341-01
	:	
	:	Docket No. WEVA 2006-854
	:	A.C. No. 46-08791-090341-02
v.	:	
	:	Docket No. WEVA 2007-666
	:	A.C. No. 46-08791-121866-01
	:	
WOLF RUN MINING COMPANY,	:	Sago Mine
Respondent	:	

DECISION ON REMAND

Appearances: Robert S. Wilson, Esq., Office of the Solicitor, U.S. Department of Labor, Arlington, Virginia, for the Petitioner;
R. Henry Moore, Esq., Jackson Kelly PLLC, Pittsburgh, Pennsylvania, for the Respondent.

Before: Judge Feldman

These civil penalty matters have been remanded by the Commission for further consideration. 32 FMSHRC 1669 (Dec. 2010). The subject five citations, that concern lightning arrester protection for exposed power conductors and telephone wires, were issued following the Mine Safety and Health Administration ("MSHA") investigation of the January 2006 Sago Mine disaster. The explosion, in which 12 miners were killed and one was seriously injured, was caused by lightning that ignited methane in an inactive area of the mine. *Id.* at 1670. The explosion destroyed seals that separated the inactive area from the active workings. *Id.* The five citations at issue did not contribute to the accident.

A. Background

The five citations allege violations of the mandatory standard in 30 C.F.R § 75.521. Section 75.521 states:

> [1] Each ungrounded, exposed power conductor and each ungrounded, exposed telephone wire that leads underground shall be equipped with suitable lightning

> arresters of approved type within 100 feet of the point where the circuit enters the mine. [2] Lightning arresters shall be connected to a low resistance grounding medium on the surface which shall be separated from neutral grounds [for underground equipment] by a distance of no less than 25 feet.[1]

An understanding of the design and function of lightning arresters is essential for an understanding of the resolution of the issues in this case. The parties have explained the principles behind the operation of lightning arresters:

> A lightning arrester is a device that limits the overvoltage of lightning or other electrical surges by providing an electrical path between an ungrounded conductor and earth which is used as the grounding medium. A simple lightning arrester consists of two contacts that are separated by an air gap. One contact is connected to the transmission line and the other is connected to earth. The normal voltage of the circuit cannot bridge the gap. When an overvoltage occurs it sparks the gap between the contacts. This creates an electrical path for the excess energy to discharge to earth.

Jt. Ex. 1, at 3.

The Commission's remand described the interrelationship between the first provision of section 75.521 that requires lightning arresters, and the second provision that requires ground field separation. The Commission stated:

> When an arrester directs overvoltage from lightning into the ground on the surface of the mine, an electrical field is created there, and serves as the grounding medium for that arrester. That area cannot be too close to the separate area serving as the neutral ground for a mine's underground electrical equipment, otherwise electrical current from a lightning strike could travel along the neutral grounding medium to the underground equipment. To reduce the likelihood of such an event occurring, the second sentence of section 75.521 requires that the grounding medium for a lightning arrester must be at least 25 feet away from the neutral grounding medium for the underground equipment. Tr. 344, 398-400;[2] Gov. Ex. 8 (MSHA Program Policy Manual ("PPM") excerpt for section 75.521 (stating that "[t]his distance prevents lightning surges from being transmitted to

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[1] The area designated to serve as the neutral ground for underground equipment is a low resistance ground bed, which would serve to dissipate electricity from the frames of such equipment in the event of an electrical fault in the system. Tr. 383-84.

[2] References to the trial and oral argument transcripts are by "Tr." and "OA Tr.," respectively, followed by the transcript page.

the neutral ground field where they could momentarily energize the frames of equipment grounded to the neutral ground field").

32 FMSHRC at 1672.

Electrical energy travels in all directions through the path of least resistance. Tr. 315. Consequently, the purpose of section 75.521 is twofold: (1) to provide arrester protection from a lightning surge in power conductors and telephone wires situated on the surface that lead underground; and, (2) to maintain a separation of at least 25 feet between the arrester ground field on the surface, and the neutral ground for underground equipment, to prevent a lightning surge from traveling underground.

B. Summary of Disposition

Specifically, the subject citations are: (1) a significant and substantial ("S&S")[3] "grounding medium citation" concerning the 25 feet minimum separation of a lightning arrester ground field from the neutral grounds in Citation No. 7583340; (2) the failure to install lightning arresters on power conductors in a 120-volt cable energizing an underground water pump from a power center on the surface, designated as non-S&S, in Citation No. 7582485; (3) the failure to install lightning arresters on exposed power conductors in two 575-volt cables that originated from a power station underground and energized two battery chargers on the surface, designated as S&S, in Citation Nos. 7583316 and 7583317; and, (4) the failure to install lightning arresters on two telephone wire conductors and trolley wire conductors that ran from the dispatcher's office on the surface and entered the mine through a track entry, designated as S&S, in Citation No. 7335233.

The initial decision affirmed three of the five citations. The grounding medium and water pump citations were affirmed. The telephone and trolley wire citation also was affirmed, although the S&S designation was deleted. 31 FMSHRC 640 (June 2009) (ALJ). The two battery charger citations were vacated. *Id.*

In its remand, the Commission did not disturb the initial decision with respect to the affirmation of water pump Citation No. 7582485.[4] 32 FMSHRC at 1688. The remand vacated the affirmation of S&S grounding medium Citation No. 7583340. *Id.* The initial determination

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[3] Generally, a violation is properly designated as S&S if it is reasonably likely that the hazard contributed to by the violation will result in a serious injury. *Nat'l. Gypsum Co.*, 3 FMSHRC 822, 825 (April 1981).

[4] As explained herein, there is an important distinction between the energy sources for the water pump and battery chargers. Unlike the water pump, which was energized from a power center located on the surface, the battery chargers were energized from an underground power center that was connected to the neutral grounds.

vacating the two battery charger cable Citation Nos. 7583316 and 7583317 was reversed and remanded. *Id.* Finally, the telephone and trolley wire Citation No. 7335233 was affirmed in result and remanded for a resolution of the S&S issue. *Id.*

Following the remand, the parties participated in a telephone conference to discuss the issues raised by the Commission. The parties agreed to present oral argument, in lieu of filing briefs. The oral argument was held at the Commission's Headquarters on March 1, 2011. At the close of the oral argument, the parties waived the filing of additional briefs.

As discussed herein, S&S grounding medium Citation No. 7583340 shall be affirmed. Battery charger cable Citation Nos. 7583316 and 7583317 shall be vacated based upon a lack of adequate notice. As summarized below, the S&S designation in telephone and trolley wire Citation No. 7335233 shall be deleted.

With respect to the telephone and trolley wire citation, the Secretary argues that a lightning strike, however remote, should be assumed for the purposes of S&S. The Secretary's reliance on assumption is misplaced because whether a hazard posed by a violation can contribute to serious injury, and whether such injury is reasonably likely to occur, are independent issues. A relevant lightning strike may be assumed for the limited purpose of determining whether the hazard posed by a violation is capable of resulting in serious or fatal injuries. With regard to S&S, however, consistent with *Mathies*[5] and its progeny, the Secretary retains the burden of demonstrating that a relevant lightning strike event is reasonably likely, in turn, posing the reasonable likelihood that serious injury or death will occur. The S&S designation shall be deleted because it is not reasonably likely that a lightning strike will occur in proximity to a particular location. Thus, it cannot be said that it is reasonably likely that a serious lightning related injury will occur as a consequence of the cited violation.

C. Separation of Grounding Mediums – Citation No. 7583340

At the Sago Mine, there were three high-voltage power lines, suspended on a series of poles, that originated from the substation. Gov. Exs. 9, 22, 23; 32 FMSHRC at 1672. The high-voltage lines were equipped with an overhead "static wire" that provided "umbrella" type protection from lightning. 32 FMSHRC at 1672. The high-voltage lines were also equipped with multiple lightning arresters. *Id.* The static line and the arresters had a common ground to earth at the base of one of the poles, known as a "butt ground," via copper wires designed to transfer energy from a lightning strike. *Id.* Intermingled with the high-voltage lines was a cable powering stacker belts that were located entirely above ground. *Id.* It is undisputed that one end of the copper ground wire in that cable was connected to the butt ground. *Id.*

[5] As discussed *infra*, the Commission initially articulated the parameters for its analysis of whether a violation is significant and substantial in *Mathies Coal Co.*, 6 FMSHRC 1 (Jan. 1984).

i. Connection to the Belt Structure

The Secretary's mine inspectors testified, as alleged in Citation No. 7583340, that the other end of the ground wire in the cable was connected to the metal frame of the conveyer belt which, in turn, was connected to the neutral grounds through the underground power center. *Id.* at 1672-73. In contrast, Wolf Run's safety manager, John Stemple, denied that the ground wire was attached to the belt structure. Stemple asserted that the ground wire entered a steel pipe through a weatherhead where it connected to an electrical control box that powered the stacker belts. Tr. 727-28. In such a case, the butt ground would not have been connected to the neutral grounds.

Resolution of this issue is necessary to determine the fact of the alleged violation. If the ground wire was attached to the belt structure as alleged, it constituted a violation of the provision of section 75.521 that requires the arrester butt ground and the neutral grounds to be separated by at least 25 feet. The Commission's remand directs that I resolve this underlying credibility issue.

Although the initial decision did not explicitly discredit Stemple's testimony, the decision credited the testimony of MSHA inspectors James Honaker and Arthur Wooten, both of whom observed that the ground wire was attached to the belt structure. Tr. 69-71, 332, 359, 831. Their observations were discussed with Dave Mason, an electrical contractor employee, and Larry Dean, an electrician employed by Wolf Run, who were also present at the time of Wooten's and Honaker's observations. Tr. 831-34. Significantly, Wolf Run did not call Dean to rebut the recollections of Honaker and Wooten. More significant however, is the contemporaneous diagram drawn by Honaker, dated February 8, 2006, which depicts a "solid connection" between the cable's ground wire and the belt structure frame. Tr. 832-33; Gov. Ex. 22.

At oral argument, Wolf Run conceded that the record does not reflect when Stemple observed the subject ground cable. OA Tr. 23. Moreover, Stemple's assertion, without more, is a self-serving exculpatory statement entitled to little weight. In the final analysis, the weight of the evidence based on the objective and corroborated observations of two mine inspectors, as well as their contemporaneous notes, supports the fact of the violation with respect to the connected ground fields.

ii. Conductivity of the Belt Structure

The remand also directed that I address Wolf Run's alternative argument that, even if a belt structure connection was established, the belt structure lacked the conductivity to constitute a violation of the ground field separation requirement in section 75.521. 32 FMSHRC at 1676-77. Specifically, Wolf Run contends the belt structure was incapable of conducting electrical current the distance of approximately 75 feet that separated the grounded

connection at the frame from the stacker motor.[6] OA Tr. 48-50; Gov. Ex. 22. As a threshold matter, Wolf Run's assertion concerning the lack of conductivity of the belt structure is speculative. Moreover, it is not supported by Wooten's testimony that the belt structure serves as a grounding medium. Gov. Ex. 9; Tr. 278-80; 341-46. Wooten's testimony in this regard is consistent with MSHA's Sago Mine Accident Report that noted that "grounding conductors for the belt starters and motors on all conveyor belts were connected to the frames of the starters, the belt drive motors, and the *metal frames of each conveyor belt*." MSHA, *Report of Investigation of the January 2, 2006, Fatal Underground Coal Mine Explosion at the Sago Mine,* 163, (2007) (emphasis added).[7]

Finally, Wolf Run's assertion that the belt structure is an ineffective grounding medium is belied by its own conduct. It is significant, if not dispositive, that Wolf Run's utilization of the copper ground wire, by attaching it to the conveyer belt frame, is an evidentiary admission by conduct.[8] In addition, the lack of conductivity argument is also at odds with Wolf Run's assertion, articulated during oral argument, that current carried by the belt structure would be directed to ground at the base of the belt support structure on the surface, rather than to the neutral ground. OA Tr. 95.

In the final analysis, the evidence supports the fact that the copper ground wire in the cable energizing the stacker motor was connected to both the belt structure and the arrester butt ground field. Given the belt structure's capacity to conduct electricity, the neutral grounds and the butt ground were not separated by 25 feet as required by section 75.521. Consequently, the Secretary has demonstrated the fact of the violation cited in Citation No. 7583340.

iii. S&S

Having established the fact of the violation, the remaining issue is the propriety of the Secretary's S&S designation. As a general proposition, a violation is properly designated as S&S if, based on the particular facts surrounding that violation, there exists a reasonable likelihood that the hazard contributed to by the violation will result in an injury or an illness of a reasonably serious nature. *Nat'l. Gypsum,* 3 FMSHRC at 825. In *Mathies,* the Commission explained:

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[6] The stacker motor, which was bolted to the conveyor structure, was grounded to the neutral ground through the underground power center. Gov. Exs. 9, 22.

[7] Although not admitted in evidence, the Sago Mine Accident Report is a public document.

[8] "Conduct of a party inconsistent with [its] position on trial is admissible against [it] as an 'admission by conduct.'. . . Conduct regarded as an admission is a form of circumstantial evidence. The inference is from the conduct to the state of mind of the actor, and from his state of mind to the fact which caused it." *Richardson on Evidence*, 10th Ed., § 219.

> In order to establish that a violation of a mandatory safety standard is significant and substantial under *National Gypsum*, the Secretary of Labor must prove:
>
> (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 [by the violation] will result in an injury; and (4) a reasonable likelihood that the injury in question will be of a reasonably serious nature.

6 FMSHRC at 3-4; S*ee also Austin Power Inc. v. Secretary*, 861 F.2d 99, 103-04 (5th Cir. 1988), *aff'g* 9 FMSHRC 2015, 2021 (Dec. 1987) (approving *Mathies* criteria).

In *U.S. Steel Mining Co., Inc.*, 7 FMSHRC 1125, 1129 (Aug. 1985), the Commission explained its *Mathies* criteria as follows:

> We have explained further that the third element of the *Mathies* formula "requires that the Secretary establish a reasonable likelihood that the hazard contributed to will result in an event in which there is an injury." *U.S. Steel Mining Co., Inc.*, 6 FMSHRC 1834, 1836 (Aug. 1984). We have emphasized that, in accordance with the language of section 104(d)(1), it is the contribution of a violation to the cause and effect of a hazard that must be significant and substantial. *U.S. Steel Mining Company Co., Inc.*, 6 FMSHRC 1866, 1868 (Aug. 1984) (emphasis in original).

The Commission subsequently reasserted its prior determinations that as part of any S&S finding, the Secretary *must prove* the reasonable likelihood of an injury occurring as a result of the hazard contributed to by the cited violative condition or practice. *Peabody Coal Co.*, 17 FMSHRC 508 (April 1995); *Jim Walter Resources, Inc.*, 18 FMSHRC 508 (April 1996).

Resolution of whether a particular violation of a mandatory standard is S&S must be made assuming continued normal mining operations. *U.S. Steel Mining*, 7 FMSHRC at 1130. Thus, consideration must be given to both the time frame that a violative condition existed prior to the issuance of a citation, and the time that it would have existed if normal mining operations had continued. *Bellefonte Lime Co.*, 20 FMSHRC 1250 (Nov. 1998); *Halfway, Inc.*, 8 FMSHRC 8, 12 (Jan. 1986).

Consistent with *Mathies* and its progeny, the focus is on the hazard posed by the cited violation. Section 75.521 seeks to ensure that electrical energy dissipated into the surface butt ground is not transferred back through the underground mine by way of the neutral ground medium. Applying *Mathies*, the first element has been satisfied since the evidence supports the fact of the violation. The second and fourth elements of *Mathies* are self evident with respect to the dangers associated with a lightning strike, and the obvious potential for catastrophic injuries. This leaves the remaining third element of *Mathies* that "requires the Secretary to establish a

reasonable likelihood that the hazard contributed to will result in an event in which there is an injury." *Bellefonte*, 20 FMSHRC at 1254-55. In evaluating the likelihood of injury, the analysis centers on the contribution of the violation to the cause and effect of the electrocution hazard. *U.S. Steel*, 6 FMSHRC at 1868.

Ordinarily, a section 75.521 violation involves the failure to provide adequate protection from lightning. But, here, Wolf Run not only failed to install lightning arresters – it negated any protection afforded by a grounding medium. In so doing, it provided a direct path for a lightning surge underground. The third element of *Mathies* only requires a showing that the violation *contributed* to the cause and effect of a hazard. But, here, Wolf Run *created* the cause and effect of the hazard by exposing underground miners to the possibility of a lightning surge.

Although lightning striking any given location is not a common occurrence, the likelihood of serious injury must be considered in the context of exposure to the electrocution hazard posed by the violation during continued mining operations. *Halfway, Inc.*, 8 FMSHRC at 12. As noted by the Commission, even if lightning does not strike directly, an indirect strike can induce thousands of volts and amps of electric current into power conductors. 32 FMSHRC at 1670-71. In such event, the hazard associated with this violation creates the heightened risk of electrocution that otherwise would not have existed. Thus, it is reasonably likely that serious or fatal injuries will occur, and, as such, the violation is properly designated as significant and substantial.[9]

With respect to Wolf Run's culpability, inspector Wooten's attribution of moderate negligence is supported by the record because the condition was obvious and in plain view. Tr. 403-05. There are no other mitigating or aggravating penalty criteria factors that affect the appropriate civil penalty. Given the S&S nature of the violation and its serious gravity, there is no adequate basis for modifying the $963.00 proposed civil penalty for Citation No. 7583340.[10]

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[9] The S&S determination is not based on the assumption of the occurrence of a lightning strike. Rather it is based on Wolf Run's *creation of the hazard* by providing a path for lightning underground by connecting the butt ground to the neutral ground.

[10] The statutory civil penalty criteria in 30 U.S.C. § 820(i) directs the Commission to consider:

> . . . the operator's history of previous violations, the appropriateness of such penalty to the size of the business of the operator charged, whether the operator was negligent, the effect on the operator's ability to continue in business, the gravity of the violation, and the demonstrated good faith of the person charged in attempting to achieve rapid compliance after notification of a violation.

D. Absence of Arresters on Power Conductors Energizing Battery Chargers – Citation Nos. 7583316 and 7583317

Citation Nos. 7583316 and 7583317, both designated as S&S, concern the lack of lightning arresters on two 575-volt cables, both of which originated at a power center located underground and powered separate battery chargers located on the surface. In the initial decision, I concluded that "the installation of lightning arresters on power conductors in a cable that is grounded to the neutral ground is prohibited by section 75.521 because it would violate the 25 foot minimum separation [required by the section.]" 31 FMSHRC at 658. The Commission concluded that I erred, because unlike the ground medium violation, where the butt ground and neutral grounds shared a common ground wire, a ground wire conductor in a cable containing exposed power conductors does not share a common ground wire with arresters that direct overvoltage into the ground. 32 FMSHRC at 1683-84.

I. Fair Notice Test

Thus, the Commission reversed the initial decision vacating Citation Nos. 7583316 and 7583317 and remanded for a determination of whether there was adequate notice that the term "'ungrounded conductor' . . . include[s] the conductors at issue [in the cables powering the battery chargers]." 32 FMSHRC at 1686. The Commission noted that considerations of due process prevent an agency from enforcing a regulation if "validat[ion] [of] the application of a regulation . . . fails to give fair warning of the conduct it prohibits or requires." 32 FMSHRC at 1682 *citing Gates & Fox Co. v. OSHRC*, 790 F.2d 154, 156 (D.C. Cir. 1986). The Commission summarized its test for fair notice in its remand:

> The Commission's test for notice under the Mine Act 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 (Nov. 1990). In deciding whether a party had adequate notice of regulatory requirements, a wide variety of factors is relevant, including the text of a regulation, its placement in the overall regulatory scheme, its regulatory history, the consistency of the agency's enforcement, and whether MSHA has published notices informing the regulated community with ascertainable certainty of its interpretation of the standard in question.

32 FMSHRC at 1682 (citations omitted).

i. Multi-Directional Path of Electricity Undermining Purpose of Section 75.521

The lack of efficacy in the application of section 75.521 to the subject battery charger power conductors is central to resolution of the due process notice issue remanded by the Commission. While equipping arresters on exposed (surface) power conductors in a cable grounded to the neutral ground is not strictly prohibited by section 75.521, the weight of the evidence reflects that such installation would not adequately protect underground miners from a lightning strike. Unlike the cables powering the stacker motor, the water pump, and the telephone system, the cables powering the battery chargers are connected to the neutral ground medium through the underground power center. As explained below, given the multi-directional path of electricity, equipping arresters on exposed conductors in cables grounded to the neutral grounds through an underground power center, would be at odds with the purpose of the regulation.

As previously noted, electrical energy travels in all directions through the path of least resistance. Thus, power conductors, ground wire conductors, and lightning arresters can transfer electrical energy in all directions. Tr. 447. As such, the overvoltage resulting from lightning, capable of as much as a million volts, can bridge the gap, in both directions, between arresters and conductors. In such event, energy transferred back from the arrester to the power and ground conductors in the battery cables will provide a path for an electrical surge to enter underground. In this regard, Wooten testified that "a lot" of electrical current can be transferred, "both ways," from lightning arresters through the underground mine through the ground wire conductor in the cable. Tr. 448. Specifically, Wooten explained:

> Moore: *And when you have lightning causing current to move in a cable, and I think you said repeatedly here this morning, it will go in all directions?*
>
> Wooten: *All directions, all paths.*
>
> Moore: *All paths?*
>
> Wooten: *Yes, sir.*
>
> Moore: *Some of it will go down – if there's a lightning arrester, will go down the lightning arrester?*
>
> Wooten: *Yes.*
>
> Moore: *Some of it may go, for example, if you have a ground in that cable, it may go along the ground?*
>
> Wooten: *Yes, sir.* And it grounds to the equipment.

Moore: Well, actually the ground is designed – it normally has no current on it, does it?

Wooten: No, sir. Normally.

Moore: And it's designed to take electricity from the equipment and take it to the ground bed?

Wooten: That's correct.

Moore: *And if you have lightning-induced electricity in a cable, and it's induced on the grounding conductor, it will take that to the [neutral]ground bed, that's what it's intended to do?*

Wooten: *It takes it both ways. All paths.*

Moore: *So it will take it, some of it, to the ground field?*

Wooten: *That's correct.*

Moore: Now, I'm puzzled here. We've got a grounding conductor essentially from the lightning arrester into the ground?

Wooten: Yes, sir.

Moore: And because that lightning arrester's hooked into the phase conductors, it too may send current into the phase conductors; isn't that right?

Wooten: You mean backwards?

Moore: Yes.

Wooten: It could.

Moore: Well, you said on the grounding conductor in the cable that it could send it both ways?

Wooten: Uh-huh (yes).

Moore: You're nodding your head. I assume you mean yes?

Wooten: I said yes.

Moore: So you have a grounding conductor for the lightning arrester, and it could send it both ways?

Wooten: Yes.

Moore: And so it could send it not only into the ground but it could also send it in the phase conductor?

Wooten: That's correct.

Moore: So if you have lightning and you have a lightning arrester, you could be – assuming you'd get a small enough strike it just affected the lightning arrester, it would be sending current into the mine too, right?

Wooten: It could, yes.

Moore: And you can't really quantify how much will go down into the ground from the lightning arrester and how much will go back into the phase conductor from the lightning arrester?

Wooten: I can't.

Moore: And if any of us have looked at the equations that Sandia did in their analysis of how far lightning would go for the [accident] report, we'd all sort of say maybe they can't, right? Because Sandia did an analysis, did they not? Sandia National Laboratories did an analysis for that report that tried to analyze particular strikes and particular locations, did they not?

Wooten: Yes.

Moore: And you can't really quantify for any current that's put onto the grounding conductor in a cable by lightning how much will go to the ground bed and how much will go toward the equipment?

Wooten: No, sir. But the magnitude of it, it's going to be a lot both ways.

Moore: A lot both ways?

Wooten: A lot both ways.

Moore: And probably the magnitude from the current induced in the lightning arrester will be a lot both ways, too, won't it?

Wooten: Could be, yes.

Moore: And as you said, lightning goes in all directions? The electricity from lightning goes in all directions?

Wooten: All paths.

Tr. 445-49 (emphasis added).

ii. Reasonably Prudent Person Analysis

In applying the reasonably prudent person test, the credible testimony of Denver "Dick" Wilfong, Jr., Wolf Run's chief maintenance foreman, concerning his understanding of "ungrounded conductors" in section 75.521 is revealing. Wilfong conceded that lightning arresters were necessary for power conductors connected to above ground surface power centers. Significantly, surface power centers are not connected to the neutral grounds. Tr. 819-20. However, Wilfong believed that installing arresters on power conductors energizing equipment on the surface from power centers underground was not required because of the protection afforded by the neutral ground medium. Tr. 823. Wilfong believed that the subject power conductors energizing the battery chargers were already "grounded" through the neutral grounds and through grounding resisters at a 600 volt circuit located underground. Tr. 823.

Significantly, Wilfong's opinion regarding the efficacy of installing arresters on exposed conductors energizing equipment from underground power centers is supported by the testimony of inspectors Honaker and Wooten. Both Honaker and Wooten stated that it is "unusual" to power surface equipment from underground. Tr. 320-21, 862. Both inspectors testified that a lightning surge can be transferred underground from the arrester ground field to the neutral ground medium. Tr. 445-49, 861-62, 877-78.

Honaker unequivocally stated that attaching lightning arresters on conductors originating from underground power centers was "doomed to failure." 31 FMSHRC at 658; Tr. 877. Honaker testified:

Wilson: So by definition, for a power conductor to provide energy to the equipment, it can't be grounded, right?

Honaker: That's right.

Wilson: Now, in all your experience, *how many times have you seen this type of a situation where you had* either *equipment on the surface being powered by a source from underground* or equipment underground being powered from a source on the surface?

Honaker*: It's very seldom that you see that* . . . [n]ow when they simply lay [a cable] on the ground, its very difficult to protect those cables in that type of installation from lightning strikes. *It simply is hard to separate the ground field when you do that and make it work effectively. I never put that type of installation in because it's so difficult to comply with 75.521 and do it as it should be done for the safety of the people [underground] when you put that system in in that manner.*

Wilson: And Judge Feldman asked you if a track being a power conductor was the only exception to [75.]521. There are also exceptions laid out in the program policy manual, is that right?

Honaker: Yeah. Those are exceptions, right. They weren't necessarily – when those were written and I was with MSHA at the time and worked indirectly for Cecile Lester who wrote most of the policies during that time when I first came to MSHA, *lightning was one of the sections I wrote some policy on.* It wasn't finalized until I left the agency, and *it certainly wasn't written like I thought it should be. We never addressed the possibility of someone [powering equipment on the surface from a power source underground]*.

* * * * * * * *

Court: *But you can't attach [the conductors in the cable] to the arrester ground if it's attached through some other system of grounding and ends up on the earth.*

Honaker: *You're right. That's the problem with this type of system. When you put this system in, it's doomed to failure. I know what you're saying. It's not a system you would normally put in.*

Court: That's the problem. I understand. And that's the problem that we have because as you say this system can't be adopted to fit this regulation. . . .

Honaker: People don't normally [power equipment on the surface from a cable underground]. The only way you can [protect the cable from lightning] is like build a shelter so you could comply and have it sheltered from lightning and that would meet one of the criteria [in the program policy manual].

Tr. 861-62, 877-78 (emphasis added).

The Secretary asserts that a reasonably prudent person familiar with the purposes of the standard should recognize that lightning arresters were required on these ungrounded conductors because of the plain language of the standard. OA Tr. 159-62. Satisfying the "reasonably prudent person" test for adequate notice requires the Secretary to demonstrate industry

recognition of its obligations in the context of the protective purposes of the standard. However, the Secretary's inspectors have conceded that equipping these conductors with arresters was "doomed to failure" because it would not adequately protect underground miners. Although Honaker testified that "electrical people" understand section 75.521, he conceded that there was confusion amongst safety directors regarding their obligations under the regulation. Tr. 886. Having failed to demonstrate that the protective purpose of section 75.521 will effectively be served by application of section 75.521, the Secretary has failed to demonstrate that Wolf Run possessed the requisite adequate notice to satisfy due process.

iii. Regulatory Scheme and Program Policy Manual

Moreover, the Secretary's application of section 75.521 to the subject conductors is fundamentally inconsistent with MSHA's Program Policy Manual that provides guidelines for when surface power conductors are not deemed "exposed" and, therefore, not a threat to transfer lightning energy underground. The relevant provision of the Program Policy Manual for section 75.521 states:

> Conductors that are (1) provided with metallic shields; (2) jacketed by a ground metal covering or enclosure; (3) installed under grounded metal framework; (4) buried in the earth; or (5) made of triplex or quadraplex that is supported by a grounded messenger wire, *are not considered exposed for the length so protected*.

Gov. Ex. 8 (emphasis added).

Inspector Honaker participated in the policy discussions concerning regulations dealing with lightning protection for power conductors. Honaker essentially stated that MSHA never addressed the issue of powering surface equipment from an underground power source. Tr. 862-63. Thus, the Program Policy Manual for section 75.521, which contains the preferred methods for protecting exposed conductors, implicitly recognizes that the installation of an arrester on an exposed surface conductor is an ineffective method of preventing electrical overvoltage from traveling underground.

iv. Regulatory History and Text of the Regulation

Section 75.521 was promulgated in February 1973. Tr. 849. Honaker explained that at the time of its promulgation the term "ungrounded conductors" had meaning with respect to electrical systems using direct current ("DC"). However, virtually all systems now use alternating current ("AC"). Tr. 848-50. Consequently, nearly all power conductors are now ungrounded rendering the term "ungrounded" power conductor in section 75.521 essentially superfluous, and exacerbating the section's lack of clarity.

In the final analysis, the record fails to reflect that a reasonably prudent person familiar with the mining industry and the protective purposes of section 75.521 would have recognized that this mandatory standard required the installation of lightning arresters on the subject ungrounded power conductors. Consequently, the cited violations in Citation Nos. 7583316 and 7583317 as applied to Wolf Run, given the circumstances and testimony in this case, must be vacated on due process grounds for lack of notice.

In view of the unequivocal testimony of the MSHA inspectors, it is apparent that the efficacy of lightning arrester protection on exposed power conductors energizing surface equipment from underground is, at best, questionable. Perhaps MSHA should consider revising the provisions of section 75.521 to do directly what it, in effect, seeks to accomplish indirectly through its Program Policy Manual. Namely, prohibit exposed power conductors that originate underground unless they are compliant with MSHA's Program Policy Manual and therefore are "*not considered exposed for the length so protected."* Gov. Ex. 8 (emphasis added). Such a prohibition would prevent deriving a false sense of security from the installation of arresters on exposed conductors that the Secretary's witness characterized as "doomed to failure." Tr. 877.

E. Telephone Wire – Citation No. 7335233

i. Procedural History and Reconsideration of S&S

Citation No. 7335233 concerns an alleged S&S violation of section 75.521 for failure to equip lightning arresters on telephone conductor wires entering the underground mine.[11] The initial decision affirmed the violation of section 75.521 because the two conductors in the cited telephone wire were not grounded. In fact, Wilfong admitted that ungrounded telephone wires entering an underground mine require lightning arrester protection. Tr. 790-94. However, the initial decision removed the S&S designation. The non-S&S determination was based on a lightning surge's likely destruction of the 12-volt telephone conductors before any electrical energy could enter the mine. 31 FMSHRC at 663-65. The remand decision vacated the non-S&S finding. 32 FMSHRC at 1687. In readdressing the S&S issue, the Commission has directed me to more precisely discuss the potential for serious injury in the context of a detailed *Mathies* analysis. *Id.* at 1678.

[11] Citation No. 7335233 also concerned an absence of lightning arresters on exposed trolley wire conductors. One conductor was grounded to the track at the mouth of the entry. The other conductor was hung along the roof and grounded to the track at the farthest end of entry. The initial decision determined that the trolley wire was adequately grounded for section 75.521 purposes. The Secretary does not dispute this finding. 32 FMSHRC at 1674; OA Tr. 245.

The Commission vacated the non-S&S finding because the testimony of MSHA inspector Kevin Hedrick was limited to the voltage normally carried by the subject telephone wires rather than the capacity of such wires. Consequently, the parties were requested to stipulate to the telephone wires' capacity at the oral argument. *Order Scheduling Oral Argument* at 3 (Jan. 28, 2011). However, the parties were unable to agree on such a stipulation. OA Tr. 242-43.

At trial, Hedrick explained the protection achieved by the installation of arresters on telephone wires. Hedrick testified:

> Well, the protection would be – when the lightning strike or nearby lightning strike occurred and the cable – signal cable and the telephone cable and the trolley phone cable became elevated – the voltage became elevated on those conductors, the lightning arrester would provide an immediate path to ground where they're connected to shunt energy to ground before it could reach the underground workings. It would certainly reduce the amount of energy that went underground significantly.[12]

Tr. 631.

As noted, the initial decision determined that the telephone wire would be destroyed by a lightning surge, capable of more than one million volts, before the electrical energy could enter underground. 31 FMSHRC at 664. However, upon reconsideration, this conclusion is not supported by the credible testimony. Hedrick noted that the destruction and disconnect of conductors at the source of an electrical surge does not immediately de-energize the load side of the conductors. Hedrick stated:

> There could be energy still on the load side. For example, you've heard of people that work on television sets, and even though they're unplugged, they have to be careful. If you stick a screwdriver in the wrong place, you could injure yourself because there's large capacitors in there that store energy and there could remain energy on the load side.

Tr. 662.

Thus, on balance, the Secretary has demonstrated the subject telephone wire has the capacity to transmit a lightning surge underground that poses a risk of serious injury. Consequently, the Secretary has satisfied the first, second and fourth elements of *Mathies*. 6 FMSHRC at 3-44. However, the S&S analysis does not stop there**.** An S&S determination must be based on the *particular facts* surrounding the violation. *Texasgulf, Inc.*, 10 FMSHRC

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[12] The rerouting of overvoltage from the arresters through the underground mine was not at risk as the telephone wire was not connected to the neutral ground medium.

498, 501 (Apr. 1988). Consistent with the third *Mathies* element, these particular facts must establish a reasonable likelihood that the hazard contributed to will result in an event, *i.e.*, a lightning strike, causing serious injury or death. *Bellefonte*, 20 FMSHRC at 1254-55.

The Secretary has stipulated that it cannot demonstrate, by a preponderance of the evidence, the reasonable likelihood of lightning striking in the vicinity of a particular location, *i.e.*, the Sago Mine. Tr. 462-65, 699. However, the Secretary argues that, "[e]ven if a lightning strike and an overvoltage on the affected lines are found not to be reasonably likely to occur, the violations should still be considered S&S because the only proper way to evaluate the S&S finding is to assume such an overvoltage has occurred." *Sec'y post-hrg. br.* at 49. In calling for an assumption of overvoltage caused by lightning, the Secretary states she is not arguing for a presumption in this case.[13] *Id.* Yet the Secretary, in her brief, relies on the narrow presumption of the development of respiratory disease from exposure to violations of the respirable dust standard adopted by the Commission in *Consolidation Coal.*[14] *Id.*

ii. Assuming the Event of a Lightning Strike Rather Than the Likelihood of its Occurrence

In a split decision in *Manalapan*, the Commission addressed the role of assumptions in questions of S&S. *Manalapan Mining Company, Inc.*, 18 FMSHRC 1375 (Aug. 1996). The Commission lacked consensus on whether to adopt the Secretary's proposed assumption of the occurrence of a fire in analyzing whether a fire suppression violation was S&S.[15] Commissioners Holen and Riley, noting that the Secretary has the burden of proving a violation is S&S, declined

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[13] This nuance proffered by the Secretary is a distinction without a difference. A "presumption" is a "legal inference *or assumption* that a fact exists, based on the known or proven existence of some other fact or group of facts." *Black's Law Dictionary* 558 (3d. pocket ed. 2006). An "assumption" "is substantially synonymous with 'inference,' 'probability,' and 'presumption.'" *Black's Law Dictionary* 157 (4th ed. 1968) (citation omitted).

[14] The Commission noted the presumption was adopted because "it is not possible to assess the precise contribution that a particular exposure will make to the development of respiratory disease." *Consolidation Coal Co.*, 8 FMSHRC 890, 898 (June 1986) aff'd, 824 F. 2d 1071 (D.C. Cir. 1987).

[15] The Commission is currently considering a similar assumption sought by the Secretary with regard to the existence of a smoke-related emergency in determining whether a violation concerning an ineffective lifeline is properly designated as S&S. *Sec'y of Labor v. Cumberland Coal Resources LP*, 31 FMSHRC 1147 (Sept. 2009) (ALJ), *appeal pending*, *argued* Mar. 31, 2011. *Cumberland* is distinguishable because, unlike a lightning strike, the incidence of smoke and fire in a mine is enhanced by the potential ignition and fuel sources created during the mining cycle.

to expand the Commission's narrow holding in *Consolidation Coal* to presumptions of the occurrence of an emergency. *Manalapan*, 18 FMSHRC at 1379-80 *citing Peabody Coal Co.*, 17 FMSHRC 26, 28 (Jan. 1995). Commissioners Holen and Riley stated:

> The Secretary urges the Commission to presume an emergency for an undefined and potentially large class of health and safety standards without indicating what situations under those standards would qualify as an emergency. We decline to modify the time-tested Commission precedent that guides our analysis of violations alleged to be S&S by adopting such a broad based presumption.

Id. at 1380.

On the other hand, Commissioners Jordan and Marks, in adopting the Secretary's proposed assumption, summarized the assumption and underlying facts as follows, "[i]n this case, where a fire deluge system was not provided and where a fire extinguisher was not provided, *the assumption sought is the existence of a fire or explosion*." *Manalapan,* 18 FMSHRC at 1384 (emphasis added). The decision, however, apparently did not directly address the propriety of assuming the reasonable likelihood of the emergency. In fact, Commissioners Jordan and Marks implicitly agreed with the Secretary that "*[t]he likelihood of a fire or explosion occurring is not the relevant question."* 18 FMSHRC at 1385 *citing* Sec'y Br. at 13-14 (emphasis supplied by Sec'y).

In the final analysis, it is the assumption of the existence of an emergency, rather than the reasonable likelihood of an actual emergency that is addressed in *Manalapan*. The merging of the concepts of "existence" and "reasonable likelihood" in resolving questions of S&S is contrary to the Commission directive that issues of S&S must be resolved on a case-by-case basis based on the particular circumstances surrounding the cited violation. *Texasgulf,* 10 FMSHRC at 501 (combustible fuel, capable of suspension, in the presence of ignition sources constitutes a "confluence of factors" necessary to support an S&S violation). Significantly, the split decision in *Manalapan* did not alter the narrow application of *Consolidation Coal* that limits presumptions dealing with the reasonable likelihood of injury or illness to respiratory disease.

Regardless of whether the issue of assuming the reasonable likelihood of a serious injury causing event was addressed in *Manalapan*, given the split decision, there is no majority Commission decision that, in effect, *assumes S&S* by assuming the reasonable likelihood of an emergency. In the absence of a Commission consensus, the case law addressing the effect of precautionary measures on the issue of S&S is instructive. As a general proposition, safety measures and precautions do not preclude a finding of S&S. *See Buck Creek Coal, Inc., v. FMSHRC*, 52 F.3d 133, 136 (7th Cir. 1995) (fire suppression equipment such as CO monitors and water sprays do not mitigate an accumulation hazard); *AMAX Coal Company,* 19 FMSHRC 846, 850 (May 1997) (the presence of fire detection equipment and fire fighting equipment does

not negate the serious safety risk posed by fires). In this regard, in *AMAX*, the Commission noted that a " hazard continues to exist regardless of whether caution is exercised" by installing fire fighting and detection equipment. 19 FMSHRC at 850 *citing Eagle Nest, Inc.,* 14 FMSHRC 1119, 1123 (July 1992).

However, although precautionary safety measures did not prevent an S&S finding in *Buck Creek* and *AMAX*, the Secretary was still required to demonstrate the reasonable likelihood of an actual fire or explosion as a consequence of violative coal dust accumulations. *See Garden Creek Pocahontas Co.*, 11 FMSHRC 2148, 2152 (Nov. 1989) (the Secretary has the burden of proving all elements of a cited violation). For example, in *AMAX* the S&S finding was based on evidence of "[t]he presence here of an ignition source and large amounts of coal and coal dust that could propagate a fire or fuel an explosion satisf[ying] the third *Mathies* element." *Id.* at 849.

The hazard posed by the subject section 75.521 violation is the potential transmission of a lightning surge underground through telephone power conductors on the surface that are not equipped with arresters. The question is whether it is reasonably likely that the hazard created by this violation will result in a lightning strike event in which there is serious injury. *Bellefonte,* 20 FMSHRC at 1254-55. Resolution of this question is dependent on the contribution of the absence of arresters to the likelihood of a lightning strike that results in electrocution. *U.S. Steel,* 6 FMSHRC at 1868.

Violations such as defective belt rollers and coal dust accumulations provide ignition sources and fuel for a fire or explosion, and increase its likelihood. Conversely, the failure to equip exposed conductors with arresters does not increase the likelihood of a lightning strike. Although the absence of arresters does affect the hazard associated with lightning, their absence does not contribute to the likelihood of the occurrence of lightning. Since a lightning strike in proximity to a particular location is a rare event, the Secretary has failed to demonstrate that it is *reasonably likely* that the failure to install lightning arresters will result in an injury or illness of reasonably serious nature.[16] Consequently, the subject S&S designation shall be deleted.

[16] I am mindful of the Secretary's reliance on the testimony of inspectors that mines have experienced lightning strikes on multiple occasions. *Sec'y post-hrg. br.* at 49 *citing* Tr. 312, 836. However, given the random nature of lightning, the evidence does not reflect that mines are more uniquely susceptible to lightning strikes than are other locations.

In the final analysis, not all violations capable of contributing to the occurrence of serious injury are S&S. Significantly, MSHA citations require inspectors to separately evaluate both the potential degree of serious injury posed by the cited violation, and the reasonable likelihood of the occurrence of such injury.[17] Nevertheless, violations designated as non-S&S are not necessarily trivial. In fact, non-S&S violations, such as the instant failure to protect underground miners from lightning, which create the potential for catastrophe, however unlikely, are more serious in gravity than many S&S violations that only contribute to lost workday injuries. Such non-S&S violations may warrant greater civil penalties.

Although initially designated as an S&S violation, the Secretary only proposed a $440.00 civil penalty for the failure to equip the subject telephone wire with arrester protection. Although this violation has now been determined to be non-S&S, I am conflicted by the relatively small proposed civil penalties for the alleged section 75.521 violations given their serious gravity and their potential contribution to multiple serious injuries and/or fatalities as evidenced by the Sago Mine disaster. However, I reluctantly decline to disturb the $440.00 civil penalty initially proposed for Citation No. 7335233.

ORDER

In view of the above, **IT IS ORDERED** that the violation designated as S&S in 104(a) Citation No. 7583340 **IS AFFIRMED**.

IT IS FURTHER ORDERED that Citation No. 7335233 **IS MODIFIED** to reflect that the cited violation is designated as non-S&S in nature.

IT IS FURTHER ORDERED that Citation Nos. 7583316 and 7583317 **ARE VACATED**.

IT IS FURTHER ORDERED that Wolf Run Mining Company shall pay a civil penalty of $963.00 in satisfaction of 104(a) Citation No. 7583340.

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[17] For example, sections 10(A) and 10(B) on MSHA Mine Citation/Order Form 7000-3 for Citation No. 7335233 require inspectors to separately evaluate questions concerning the likelihood of injury, and, whether or not such injury can reasonably be expected to result in lost workdays, permanent disability or a fatality. Gov. Ex. 5.

IT IS FURTHER ORDERED that Wolf Run Mining Company shall pay a civil penalty of $440.00 in satisfaction of 104(a) Citation No. 7335233.

IT IS ORDERED that, within 40 days of the date of this decision, Wolf Run Mining Company shall pay the total civil penalty of $1,403.00 for Citation Nos. 7583340 and 7335233, as well as the $25,257.00 it previously agreed to pay for the 31 other citations and orders at issue in these proceedings.[18] In addition, Wolf Run **IS ORDERED** to pay the $60.00 civil penalty for water pump Citation No. 7582485 affirmed by the Commission in its remand decision. 32 FMSHRC 1669, 1688 (Dec. 2010). Upon timely payment of the total civil penalty of $26,720.00, these civil penalty proceedings **ARE DISMISSED**.[19]

Jerold Feldman
Administrative Law Judge

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[18] The initial decision approved the parties' settlement terms wherein Wolf Run agreed to pay $25,257.00 of the $28,339.00 MSHA initially proposed for 31 additional citations and orders that also are the subjects of these proceedings.

[19] The initial remand decision, issued on May 3, 2011, reflected a total civil penalty of $26,660.00. The total civil penalty was corrected by Order dated May 9, 2011, to include the $60.00 civil penalty for water pump Citation No. 7582485. Accordingly, this remand decision, which retains the original May 3, 2011, issue date, now reflects the correct $26,720.00 total civil penalty that is due and payable.