FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

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SECRETARY OF LABOR, MINE SAFETY AND HEALTH ADMINISTRATION (MSHA)	:	
	:	Docket No. LAKE 2013-160
v.	:	
ICG ILLINOIS, LLC	:	

BEFORE: Jordan, Chairman; Young, Cohen, and Althen, Commissioners

DECISION

BY: Jordan, Chairman; Young, and Cohen, Commissioners

This proceeding arises under the Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 801 et seq. (2012) ("Mine Act" or "Act"). It involves a single citation issued to ICG Illinois, LLC ("ICG") by the Department of Labor's Mine Safety and Health Administration ("MSHA"). The citation alleges that a refuge alternative at ICG's Viper Mine was located 1,110 feet from the nearest working face, in violation of 30 C.F.R. § 75.1506(c)(1).[1] The Judge concluded that a violation had occurred, was significant and substantial ("S&S"), and was the result of moderate negligence.[2] 37 FMSHRC 19, 25-27 (Jan. 2015) (ALJ). The only issue remaining before the Commission is the S&S designation. For the reasons below, we affirm the Judge.

[1] 30 C.F.R. § 75.1506(c)(1) provides in relevant part that "[r]efuge alternatives shall be provided . . . within 1,000 feet from the nearest working face." Refuge alternatives, also called refuge chambers, are "[p]refabricated self-contained units" with "structural, breathable air, air monitoring, and harmful gas removal components." 30 C.F.R. § 75.1506(a)(1).

[2] The S&S terminology is taken from section 104(d)(1) of the Act, which distinguishes as more serious any violation that "could significantly and substantially contribute to the cause and effect of a . . . mine safety or health hazard." 30 U.S.C. § 814(d)(1).

I.

Factual and Procedural Background

On September 18, 2012, MSHA Inspector Dennis Baum traveled to ICG's Viper Mine to conduct a spot inspection for methane liberation.[3] At the time, the mine was on a 10-day spot inspection cycle, due to methane liberation of more than 500,000 cubic feet in a 24-hour period.[4] While looking through the mine's examination books, the inspector noticed a report from the previous day indicating that the refuge alternative in the Main West primary escapeway needed to be moved closer to the working face. The issue was not mentioned in the pre-shift examination report for the day of the inspection, so he warned ICG's safety and compliance foreman that a citation would be issued if the refuge alternative was still too far from the face.

Meanwhile, ICG's production supervisor, Gabriel Alderman, had headed underground for his shift. When he arrived on the section, the section foreman informed him that the refuge alternative had to be moved closer to the face. Alderman asked a scoop operator to begin preparing the new area for the relocation. Such preparations included scooping the crosscut, laying down floor dust, and moving signs and lifelines. The inspector and the safety and compliance foreman later traveled down to the refuge alternative, which had not yet been moved, and found that it was 1,110-1,125 feet from the closest working face, 110-125 feet farther than the allowable maximum pursuant to 30 C.F.R. § 75.1506(c)(1). Accordingly, Baum issued Citation No. 8443225. He concluded that the violation was reasonably likely to result in fatalities and designated the citation as S&S.

The fact of the violation was not contested. 37 FMSHRC at 23. The Judge concluded that the violation was S&S, based on an analysis of the steps outlined in *Mathies Coal Co.*, 6 FMSHRC 1, 3-4 (Jan. 1984). He found that the violation contributed to the hazard of miners being unable to reach the refuge in the event of an emergency, because the extra distance "would result in additional and possibly critical delays accessing the chamber." 37 FMSHRC at 25-26. He noted the mine's history of methane and ignition issues, and the presence of possible ignition sources due to equipment working near the face. He stated that these conditions contributed to the likelihood of an ignition or explosion, which would cause poor visibility and disorientation. He found a reasonable likelihood of fatal injury for the 17 miners on the section. *Id.*

The Judge rejected ICG's contention that the Secretary failed to take the particular facts surrounding the violation into account. In making this claim, ICG pointed to the inspector's testimony that he would find every violation of the cited standard at this mine to be S&S. Tr. 46-47. The Judge stated that the inspector had limited this testimony to violations "at this mine," and also noted the mine's history of ignition and methane problems and the presence of working

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[3] Inspector Baum began working for MSHA in 2007. Prior to this, he had thirty years of experience in underground mines, during which time he ran nearly all types of equipment and conducted examinations. 37 FMSHRC at 23 n.2; Tr. 15-16.

[4] Pursuant to section 103(i) of the Act, any mine that liberates more than 500,000 cubic feet of methane during a 24-hour period is required to have an MSHA inspector inspect the mine "every 10 working days at irregular intervals." 30 U.S.C. § 813(i).

equipment near the face. 37 FMSHRC at 26. The Judge also rejected ICG's claim that the presence of self-contained self-rescuers ("SCSRs") mitigated the gravity. He noted the inspector's testimony that refuge alternatives are only meant for use in extreme situations where escape is impossible, and stated that SCSRs provide only a limited amount of air, do not protect against burns or falling rock, and "could not ensure that disoriented miners would be able to reach a refuge alternative located more than 100 feet beyond the distance they are trained to travel in emergencies." *Id.*

II.

Disposition

The Commission has recognized that a violation is S&S if, based on 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. *See Cement Div., Nat'l Gypsum Co.*, 3 FMSHRC 822, 825 (Apr. 1981). In *Mathies Coal Co.*, the Commission further explained:

> 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 will result in an injury; and (4) a reasonable likelihood that the injury in question will be of a reasonably serious nature.

6 FMSHRC 1, 3-4 (Jan. 1984) (footnote omitted); *accord Buck Creek Coal, Inc. v. FMSHRC*, 52 F.3d 133, 135 (7th Cir. 1995); *Austin Power, Inc. v. Secretary of Labor*, 861 F.2d 99, 103 (5th Cir. 1988) (approving *Mathies* criteria). In conducting the *Mathies* analysis, the focus now generally centers on the interplay between the second and third steps. *Newtown Energy Inc.*, __ FMSHRC __ , slip op. at 5, No. WEVA 2011-283 (Aug. 29, 2016).

The second step of *Mathies* addresses the contribution of the violation to a discrete safety hazard, i.e., the extent to which the violation increases the likelihood of occurrence of the particular hazard against which the mandatory standard is directed. *Newtown*, slip op. at 5, *citing Knox Creek Coal Corp.*, 811 F.3d 148, 162-63 (4th Cir. 2016) (citing *Black Beauty Coal Co.*, 34 FMSHRC 1733, 1741 n. 12 (Aug. 2012)). At this stage, it is essential that the Judge adequately define the particular hazard to which the violation allegedly contributes. A clear description of the hazard at issue provides context when determining the relative likelihood that the violation contributes to a hazard, and will also frame the potential source of injury for purposes of determining gravity in the third step of *Mathies*. The starting point for determining the hazard is the regulation cited by MSHA; the "hazard," for purposes of the *Mathies* analysis, is the danger which the cited safety standard is intended to prevent. *Newtown*, slip op. at 6.

Having clearly defined the hazard, the next task in analyzing the second step of *Mathies* is for the Judge to determine whether the Secretary has proven that the violation contributed to that hazard. That means the second step requires a determination of whether, based upon the

particular facts surrounding the violation, there exists a reasonable likelihood of the occurrence of the hazard against which the mandatory safety standard is directed. *Id.* We recognize that "reasonable likelihood" is not an exact standard measured in percentages, but rather a matter of degree, an evaluation of risk with a particular focus on the facts and circumstances presented.[5] *Id.* at 7.

At this stage, the focus shifts from the violation to the hazard. The third and fourth steps are primarily concerned with gravity, i.e., whether the hazard identified in step two would be reasonably likely to result in serious injury. *See Cumberland Coal Res., LP*, 33 FMSHRC 2357, 2364-66 (Oct. 2011) (citing *Musser Eng'g, Inc. & PBS Coals, Inc.*, 32 FMSHRC 1257, 1281 (Oct. 2010); *Knox Creek*, 811 F.3d at 162. If the Judge concludes, based upon the evidence, that the violation sufficiently contributes to the hazard identified at step two, the Judge then assumes such occurrence and determines at step three whether, based upon the particular facts surrounding the violation, the occurrence of that hazard would be reasonably likely to result in an injury. At step four, the Judge determines whether any resultant injury would be reasonably likely to be reasonably serious.

Whether a particular violation is S&S must be determined "based on the particular facts surrounding the violation, including the nature of the mine involved." *Texasgulf Inc.*, 10 FMSHRC 498, 501 (Apr. 1988). Additionally, the Commission has recognized that emergency standards "are different from other mine safety standards," as they are "intended to apply meaningfully only when an emergency actually occurs." *Cumberland*, 33 FMSHRC at 2367, *aff'd*, 717 F.3d 1020 (D.C. Cir. 2013). Accordingly, when determining whether a violation of an emergency standard is S&S, the violation should be considered in the context of the emergency contemplated by the standard. *Spartan Mining Co.*, 35 FMSHRC 3505, 3508-09 (Dec. 2013). Specifically, the existence of a contemplated emergency should be assumed when defining the hazard contributed to by the violation. *See Cumberland*, 33 FMSHRC at 2364, 2368; *Mill Branch Coal Corp.*, 37 FMSHRC 1383, 1394 (July 2015). The likelihood that the emergency will actually occur is irrelevant to the *Mathies* inquiry. *Black Beauty Coal Co.*, 36 FMSHRC 1121, 1124 (May 2014), *citing Cumberland*, 717 F.3d at 1027. Thus, contrary to ICG's concerns, the inspector was correct to assume a "disaster" or "worst case scenario" when making his S&S determination. Tr. 31-33, 54-55.

However, assuming the existence of an emergency is not the same as assuming that the violation is S&S; emergency standard violations are not per se S&S. As the Commission has made clear, the particular facts surrounding the violation must be considered. Not every violation of an emergency standard is automatically an S&S violation. *Cumberland*, 33 FMSHRC at 2368-69.

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[5] Chairman Jordan and Commissioner Cohen would hold that a violation sufficiently "contributes" if it is at least somewhat likely to result in, or could result in, a safety hazard. *Newtown*, slip op. at 20 (Jordan and Cohen, concurring and dissenting in part), *citing Knox Creek*, 811 F.3d at 162, 163 (the Secretary establishes a "contribution" for the purposes of the second step of *Mathies* when he shows that the violation is "at least somewhat likely to result in harm"); *see also* 30 U.S.C. § 814(d)(1) ("such violation is of such nature as *could* significantly and substantially contribute to the cause and effect of a . . . safety or health hazard") (emphasis added). They conclude that the outcome of this case is the same under either standard.

Refuge alternatives provide a "last resort for miners unable to evacuate the mine during an emergency." 73 Fed. Reg. 80656-01, 80681 (Dec. 2008); Tr. 26-27, 92-93. The inspector testified that emergencies requiring the use of a refuge would include roof falls, bad air, ignitions, or explosions. Tr. 26-27. Refuges increase the likelihood of survival in an "inhospitable post-emergency environment" by providing breathable air, water, food and communications. 73 Fed. Reg. at 80681. As for the specific requirement that refuges be located within 1,000 feet of the working face, the preamble to the final rule notes the "inability of miners on the working section to travel over 1,000 feet through smoke and debris to reach the refuge alternative, especially if injured or exhausted." *Id.* at 80684. The standard at issue is intended to apply in the context of an emergency so severe as to make evacuation impossible, survival outside the refuge unlikely, and travel extremely difficult in the face of smoke, debris, and possible injury.

Accordingly, the S&S analysis under *Mathies* in an emergency context must assume the existence of the emergency because the legislative or regulatory process that developed the standard assumed those conditions would be present at some point and directed that mines prepare for their occurrence. *See Cumberland Coal*, 717 F.3d at 1027-28; *Spartan Mining*, 35 FMSHRC at 3508-09. The questions before the Judge in making his S&S determination were whether, in the context of the type of emergency described above, and based on the particular facts surrounding the violation, the additional distance sufficiently contributed to a discrete safety hazard and whether that hazard was reasonably likely to result in an injury of a reasonably serious nature. The Judge found in the affirmative.[6]

Prior to applying the record facts in this case to the four-step *Mathies* test, we note that we must use the substantial evidence standard of review to evaluate the Judge's factual findings underlying his S&S determination. "Substantial evidence" means "'such relevant evidence as a reasonable mind might accept as adequate to support [the Judge's] conclusion.'" *Rochester & Pittsburgh Coal Co.*, 11 FMSHRC 2159, 2163 (Nov. 1989) (quoting *Consolidated Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938)). Substantial evidence has been found to be more than a scintilla, but less than preponderance. *Dynamic Energy, Inc.*, 32 FMSHRC 1168, 1173 (Sept. 2010) (citing *Richardson v. Perales*, 402 U.S. 389, 401 (1971)); *Consolidated Edison*, 305 U.S. at 2290 (the substantial evidence standard was met where the record was not "wholly barren of evidence" to sustain the Judge's finding).[7]

The Judge properly considered this violation in the context of the kind of emergency contemplated by the standard requiring the presence of an emergency chamber. The Judge found that the violation contributed to a hazard because the added distance would cause "additional and

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[6] ICG only explicitly challenges the Judge's findings as to the likelihood and severity of injury. However, because ICG's arguments generally address whether the *additional distance* (the violation) created a danger, we find it appropriate to address the second step of the *Mathies* analysis as well.

[7] As we discuss the separate opinion of our dissenting colleague, we are mindful of the D.C. Circuit's apt characterization of our substantial evidence standard as a "sensibly deferential standard of review" that respects the reasonable conclusions of the trier of fact. *Keystone Coal Mining Corp.*, 151 F.3d 1096, 1105 (D.C. Cir. 1998).

possibly critical delays" in miners reaching the refuge chamber in the event of an emergency such as an explosion, ignition or roof fall.[8] 37 FMSHRC at 25-26. He noted the mine's history of methane and ignition problems and the presence of ignition sources, and found that if an ignition or explosion were to occur, miners could face injury, poor visibility, and disorientation. *Id.* In other words, assuming an emergency significant enough to require a refuge chamber — which, at this mine, would most likely be an ignition or explosion resulting in disorientation, poor visibility and possible injury — the additional distance made it less likely that miners would be able to reach a place of safety. The Judge thus correctly identified the inability to reach the refuge chamber in the event of an emergency as the relevant hazard.

The standard at issue requires refuges within a reachable distance of 1,000 feet "from the nearest working face."[9] 30 C.F.R. § 75.1506(c)(1). Refuges are intended to increase the chance of survival during an emergency. It is part of the undisputed record that the refuge was at least 1,110 feet from the working face, a full 11% over the allowable maximum.[10] The farther a miner has to travel through smoke and injury, the less likely he or she is to reach the refuge. 73 Fed. Reg. at 80681, 80684. Clearly, a violation which interferes with a miner's ability to timely reach a refuge poses a danger of the type contemplated by the relevant standard. *Cf. Small Mine Development*, 37 FMSHRC 1892, 1900-01 (Sept. 2015) (in the context of an emergency that impedes passage, failure to install a refuge chamber "clearly contributes to the hazards posed by miners not having a safe location to await rescue.")[11]

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[8] The Judge stated that the violation "contributes to the possibility" that miners would be incapable of accessing the refuge. 37 FMSHRC at 25. ICG claims that the Judge misapplied *Mathies* by focusing on mere possibilities. However, the choice of language is harmless here. As discussed below, the record indicates that under these particular facts, the violation clearly contributed to the hazard.

[9] Our dissenting colleague faults us for assuming an emergency at the face when analyzing this violation's contribution to the hazard at issue. Slip op. at 12 n. 2. Likewise, he faults the inspector for assuming an emergency at the face, stating, "[s]uch tunnel vision betrays a lack of expertise." Slip op. at 16 n.8. However, while it is true that emergencies may arise outby the face, our colleague ignores the fact—understood by the inspector—that the cited regulation sets forth the maximum distance the refuge shelter can be *from the face.* As noted above, the "hazard" for purposes of the *Mathies* analysis is the danger which the cited safety standard is intended to prevent. The hazard contemplated by 30 C.F.R. § 75.1506(c)(1) is an emergency at the face.

[10] While the dissent characterizes our notation of the 11% variance as "conjured fiction," slip op. at 13, it is simple mathematics applied to the facts of record and the language of section 75.1506(c)(1).

[11] *Small Mine Development* is currently on appeal in the D.C. Circuit. *Small Mine Development v. FMSHRC*, No. 15-1391 (D.C. Cir. Oct. 27, 2015). Commissioner Young dissented and believes the case was wrongly decided. While he therefore disagrees with the use of *Small Mine Development* as an illustration of the premise stated here, he does not disagree with the premise, which in fact seems somewhat tautological.

It is of course impossible to predict the time, location, nature or severity of a mine disaster. In exercising the authority delegated by Congress in Section 315 of the Mine Act, the Secretary should be presumed to have made a reasoned policy choice in establishing the requirements for shelters, including their location. Thus, while a violation of the standard is not S&S per se, and therefore an operator may rebut the Secretary's argument that a particular violation of this standard is S&S, the record in this case supports the Judge's determination and his application of *Mathies*.

We find it significant that when the regulation was first proposed, as 30 C.F.R. § 75.1506(b)(1), it provided that refuge alternatives shall be placed "between 1000 and 2000 feet from the working face . . . ." 73 Fed. Reg. 34140, 34178 (June 2008). However, after extensive public input, MSHA changed the location requirement in the final rule "based on testimony and comments regarding the inability of miners on the working section to travel over 1000 feet through smoke and debris to reach the refuge alternative, especially if injured or exhausted." 73 Fed. Reg. at 80684. If the additional distance of 110 feet was insignificant, MSHA would not have changed the location requirement in the final rule.[12]

Although our dissenting colleague rues the lack of record evidence on points such as ceiling heights, the configuration of exit routes, and the presence of beltlines outby the face, slip op. at 15, the record does support a finding that this violation is at least somewhat likely — indeed, reasonably likely — to contribute to the hazard of miners being unable to reach the refuge. The Secretary's evidence on this point consisted of the inspector's testimony.[13] As a threshold matter, the inspector stated that, in determining whether to designate the violative condition as S&S, he assumed the occurrence of a mine disaster. He did so because refuge alternatives are only intended for use in situations in which escape is impossible, such as roof falls, fires, or explosions. He added that an additional 110 feet of travel is significant in such situations, when visibility is poor and miners may be injured and disoriented. 37 FMSHRC at 25. He noted that this is compounded by the fact that this distance is in addition to the 1,000 feet that would have already been traveled from the face, and agreed that every foot counts in an

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[12] Our dissenting colleague devotes many paragraphs to discussing comments in the rulemaking record which allegedly detract from MSHA's conclusion that the refuge shelter may be positioned no more than 1000 feet from the nearest working face. Slip op. at 14-15. This attempted re-weighing of the rulemaking record might have been appropriate in the context of litigation challenging the legitimacy of MSHA's final rule, but it is irrelevant to this case.

[13] The testimony and judgment of the inspector routinely play a significant role in S&S determinations. *Harlan Cumberland Coal Co.*, 20 FMSHRC 1275, 1278 (Dec. 1998); *Cumberland Coal*, 33 FMSHRC at 2365. While our dissenting colleague alleges that we "concede" that the inspector's opinion "is the sole reason for [our] affirmance of the S&S designation," slip op. at 15, this is something of an overstatement. Our reliance is on the entire record. The inspector's testimony explained the significance of the facts of record and explained his S&S finding in the context of all of those facts. The Judge found the testimony credible and compelling, and we find no grounds for overturning his determination.

emergency.[14] Tr. 32-33. The inspector also testified as to the mine's specific history of methane and ignition problems, and stated that in the event of a disaster, some miners would likely be injured, unable to walk, unable to see clearly, and unable to reach the refuge at that distance.[15] Tr. 17, 31-32, 47, 54-55, 60; 73 Fed. Reg. at 80684. As the inspector bluntly stated, 1,110 feet is "a long distance to travel if you are in smoke where you can't see . . . a long way to go if you are crawling or dragging an injured guy." Tr. 31-32.

This testimony constitutes substantial evidence supporting the Judge's conclusion that the added distance of 110 feet would cause "additional and possibly critical delays" in miners reaching the refuge chamber in the event of an emergency.[16] 37 FMSHRC at 25-26. Such delays establish the requisite "hazard" under step 2 of *Mathies.*

ICG points to *Rushton Mining* as an instance where the Secretary failed to establish that a violation of an emergency standard contributed to a hazard. 11 FMSHRC 1432 (Aug. 1989). However, the case is clearly distinguishable. *Rushton* involved a violation of 30 C.F.R. § 75.1704-2(a), which requires that escapeways follow the safest direct practical route. Affirming the Judge's non-S&S determination, the Commission found that not only had the Secretary failed to show that any aspects of the cited route posed a hazard, but to the contrary, Rushton had demonstrated that the cited route was particularly safe for travel. *Id.* at 1436-37. Here, there is no counter-evidence that the violation was, in fact, non-hazardous.

As to the third and fourth *Mathies* steps, the Judge concluded that serious or fatal injuries were likely to result for the 17 miners working on the section. 37 FMSHRC at 26. We find that, given the nature of the hazard involved, substantial evidence supports the Judge's finding. The inspector testified that he designated the gravity as fatal because "if they had blown up the section, to me it was unlikely that the guys would have been able to get to . . . the refuge alternative." Tr. 35-36. Assuming the occurrence of a disaster, the disaster would be fatal "if [miners] couldn't get to the refuge alternative." Tr. 54. In essence, the inspector's testimony demonstrated that in worst case scenarios (which at this mine could involve an explosion), the inability to reach a refuge chamber in the event of such an emergency was reasonably likely to

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[14] In this context, the inspector noted that while the refuge chamber was located 1,100 feet from the *nearest* working face, miners working at the other side of the section would be almost 2,000 feet from the refuge chamber. Tr. 32.

[15] ICG notes a lack of documentation regarding a history of methane and ignition problems at the mine. However, the Judge credited the inspector's testimony that the mine did, in fact, have a history of methane and ignition problems. 37 FMSHRC at 26. It is undisputed that the mine was subject to spot inspections for excess methane liberation.

[16] Our dissenting colleague alleges that the "majority does not discuss any distance between 1 foot and 110 feet at which the distance becomes S&S. That failure is significant." Slip op. at 13 n. 3. However, we need not speculate as to what intermediate distance may or may not be S&S. Our decision is constrained by the facts of record, which have established that the shelter was at least 110 feet further than the standard permits from the nearest working face. We reiterate that whether a particular violation is S&S must be determined on a case-by-case basis, considering the particular facts and circumstances established in the record.

result in serious or fatal injury. Since refuge chambers are meant to ensure survival during an emergency which has created inhospitable conditions, then common sense (as well as the history of coal mining disasters) dictates that an inability to reach the refuge chamber threatens miners' survival.

We have previously affirmed S&S findings for violations of emergency standards based on similar evidence and reasoning. In *Big Ridge*, which involved a lifeline violation, we found that the Judge properly relied on the inspector's testimony that it would be difficult to cross a 20 foot gap in the lifeline during smoky conditions, and that during an emergency miners become disoriented such that a directional lifeline is essential to avert disaster. 36 FMSHRC 1115, 1119 (May 2014). The Commission concluded that "[t]he hazard of a delayed escape or no escape at all due to a missing lifeline in an emergency is reasonably likely to result in serious or fatal injuries." *Id.*; *see also Black Beauty*, 36 FMSHRC at 1125. Similarly, here, we find that the Judge properly relied on testimony to the effect that it would be difficult to travel the additional distance to reach the refuge in emergency conditions which create poor visibility and risk of injury, and that reaching the refuge is essential to avert disaster. The hazard of being unable to reach the refuge was reasonably likely to result in serious or fatal injuries. Hence, the Secretary has proven the third and fourth steps of *Mathies.*

ICG has expressed concern regarding the inspector's statement that he would consider any refuge located more than 1000 feet from the face at this mine to be an S&S violation, even if it only exceeded the maximum by one foot. Tr. 46-47. However, the violation before us here was not trivial, and involves an 11% deviation from the allowable maximum distance in a mine with excess methane and working equipment near the face, such that any emergency requiring use of the refuge may well create poor visibility, injury and disorientation. Under these circumstances, we find that substantial evidence supports the Judge's determination that this violation sufficiently contributed to a hazard which was reasonably likely to result in serious injury.

As a final matter, we are unpersuaded by ICG's argument that the presence of SCSRs was a mitigating factor. There were caches of SCSR units within several hundred feet of the working face, all rated for an hour's use. Tr. 90-93. ICG claims they provided enough air for miners to travel the extra 110 feet to the refuge alternative, reducing the likelihood of injury in the event of an emergency. However, the Commission has repeatedly found that redundant safety measures do not mitigate S&S findings for violations of emergency standards. *See Small Mine Development*, 37 FMSHRC at 1900-01, *citing Cumberland Coal Res.*, 33 FMSHRC at 2369, *citing Buck Creek Coal, Inc.*, 52 F.3d at 136. In affirming *Cumberland Coal*, the D.C. Circuit explained that "assuming the existence of an emergency in which a lifeline would be necessary also assumes an emergency in which all of the redundant safety measures . . . have failed." 717 F.3d at 1028-29. Here, the same principle applies.[17]

[17] While the dissent criticizes our reliance on *Buck Creek* and subsequent cases post-*Newtown*, slip op. at 19 n.13, our decision does not rest solely on the law, but also on the facts found by the Judge. As we've noted, slip op. at 3, *citing* 37 FMSHRC at 26, the Judge accepted the inspector's testimony about the limits of the SCSRs, which were not responsive to all of the hazards that would attend the contemplated emergency.

III.

Conclusion

For the foregoing reasons, we affirm the Judge's determination that the refuge alternative violation was S&S.

Mary Lu Jordan, Chairman

Michael G. Young, Commissioner

Robert F. Cohen, Jr., Commissioner

Commissioner Althen, dissenting:

The decision in this case rests upon the testimony of one mine inspector who was not an expert on mine emergencies and who did not testify that he had any expertise in emergencies or, indeed, had any firsthand experience in the real world or laboratory conditions with a mine emergency. That inspector, in turn, did not testify to any conditions in the mine or specific circumstances related to the mine that could cause a 110-foot violation of section 75.1506(c)(1) to be significant and substantial ("S&S"). Instead, the inspector based the citation on his personal, untrained, and non-experiential belief that a refuge chamber located *any* distance beyond 1,000 feet is S&S. The Secretary bears the burden of proof in every case. One inspector's personal, untrained, non-expert opinion in which he testifies that one foot beyond 1,000 feet is automatically S&S, and does not support his testimony with any evidence regarding the conditions at the mine, does not carry the Secretary's burden of proof. Therefore, I respectfully dissent.

DISCUSSION

In cases involving an emergency standard, the Commission assumes the occurrence of the emergency to evaluate whether a violation of an emergency standard is S&S within the mining context of the specific standard. Assuming the occurrence of an emergency does not mean assuming that the hazard at which the standard is directed is reasonably likely to occur or that a violation is automatically S&S. *See Cumberland Coal Res., LP*, 33 FMSHRC 2357, 2367, 2369 (Oct. 2011), *aff'd*, 717 F.3d 1020 (D.C. Cir. 2013). Judges must make the S&S determination through application of the steps identified in the Commission's recent decision in *Newtown Energy, Inc.*, 38 FMSHRC __, slip op. at 4-8, No. WEVA 2011-283 (Aug. 29, 2016).

Newtown effectively revises the four steps set forth in *Mathies Coal Co.*, 6 FMSHRC 1 (Jan. 1984), to identify more precisely each of the four steps involved in making an S&S determination originally set forth in *Mathies*. Under the Commission's newly formulated *Newtown* test, the four steps of the S&S analysis require determinations of whether:

> (1) there has been a violation of a mandatory safety standard;
> (2) based upon the particular facts surrounding the violation, there exists a reasonable likelihood of the occurrence of the hazard against which the mandatory safety standard is directed;
> (3) based upon the particular facts surrounding the violation, the occurrence of that hazard would be reasonably likely to result in an injury; and
> (4) any resultant injury would be reasonably likely to be reasonably serious.

See Newtown, slip op. at 4-8.[1]

[1] Thankfully, *Newtown* ends any confusion over whether we assume the occurrence of a hazard at step two. We do not. The Secretary must prove the likelihood of such an occurrence to the requisite degree of reasonable likelihood. As a result, the long ignored step two factor is

Section 75.1506(c)(1) addresses the danger that, in an emergency, a miner might not be able to use escapeways to exit the mine quickly and safely. The section, therefore, aims at providing the miner a place of refuge until the miner is able to exit the mine safely. Thus, the hazard addressed by section 75.1506(c)(1) is that a miner could not reach a refuge chamber in case of an emergency.

Here, the operator did not contest the fact of a violation. Consequently, we move directly to the second step of the *Newtown* test, in which we determine whether, under the particular facts surrounding the violation, the Secretary proved by a preponderance of the evidence that the violation made it reasonably likely that in the event of an emergency a miner could not reach the refuge chamber. It is at this step that the Secretary's case and the majority's analysis falter.

The inspector testified that the mine was subject to section 103(i) of the Mine Act, which requires spot inspections of the subject mine based upon its liberation of methane. Tr. 16. Obviously, the conditions likely to result from the occurrence of an emergency are relevant to the S&S determination. An analysis of those conditions includes, most importantly, the particular context of the mine and the numerous possible emergencies that may occur at that particular mine.[2] However, the possibility of the occurrence of an emergency itself does not bear upon the likelihood of reaching a refuge if an emergency does occur. As my colleagues correctly state, "assuming the existence of an emergency is not the same as assuming the violation is S&S." Slip op. at 4.

My colleagues and I agree that S&S determinations must be based on the particular circumstances involved in the specific violation. *Id.* The entire Commission, therefore, accepts that the inspector must take into account the particular circumstances at the mine and explain

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now critical in every S&S analysis. The recently articulated *Newtown* test is the metric through which Administrative Law Judges must make step two determinations.

[2] The majority appears to analyze the case from a supposition that the only emergency that could occur at this mine is a face explosion. Therefore, it assumes a miner facing an emergency would have to travel an "extra" 110 feet to reach the shelter. Of course, emergencies may arise from many locations other than the face. Indeed, a specialized research study conducted for the National Institute of Occupational Safety and Health ("NIOSH") in connection with NIOSH's comments on the proposed section 75.1506(b) regulation found that the placement of the refuge is important to many different scenarios. Foster-Miller, Inc., *Report No. NSH-080020-1864, Refuge Alternatives in Underground Coal Mines*, vols. 1, 2 (2008) ("Refuge Chamber Report"). For example, the Darby mine explosion was outby the face and NIOSH's contract researcher found that, at Darby, it would have been preferable for the refuge chamber to have been located 2,000 feet from the face. *Id.* vol. 2, at 92. In emergencies, therefore, a refuge at 1,110 feet from the face actually may be 110 feet closer to the miners. The point here is that non-experts, such as the inspector in this case, have little understanding of the placement of a refuge chamber or the various emergencies that might occur at a given mine, so specific testimony about the actual mining conditions is critical to judicial analysis. Indeed, even this inspector recognized that, tragically but typically, a face explosion fatally injures all miners at the face immediately. Tr. 35-36.

those circumstances in his testimony. Such violations are not per se S&S. Elsewise, the inspector's insensible opinion in this case that 1 foot beyond 1,000 feet is "probably"—that is, presumptively—S&S would become sensible. Tr. 47.[3]

The Secretary did not qualify the inspector as an expert in mine emergencies. Although the inspector had many years of work in mines as an hourly employee, the inspector did not demonstrate or claim to have any experience in real or simulated mine emergencies or to have ever had any instruction, training, or expertise in emergencies. The Secretary does not contend that the inspector had any expertise in mine emergencies. His experience was as an hourly employee operating mining equipment and a few years as a mine inspector.[4]

There is no evidence the inspector encountered an emergency during his mining career. In fact, this is the only time he issued a citation related to the location of a refuge chamber. Tr. 45. Additionally, he did not identify any education, training, or experience in emergencies. His opinion, therefore, does not constitute, and was not offered as, an expert opinion on the location of refuge chambers.[5]

This brings us to the nub of this case. Evidence must prove that, in an emergency, miners would not be reasonably likely to be able to reach the refuge chamber. Notwithstanding the majority's conjured 11% fiction, *see supra* note 3, that proposition cannot be assumed. There is no reasonable argument that a 110-foot overage is automatically or presumptively S&S. Indeed, governing and leading authorities such as MSHA's regulations, state laws, the rulemaking record for section 75.1506(c)(1), and opinions of National Institute of Occupational Safety and Health

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[3] The majority does not discuss any distance between 1 foot and 110 feet at which the distance becomes S&S. That failure is significant; it further demonstrates acceptance that the Commission must evaluate the particular facts at the specific mine. Indeed, the majority does not cite any fact about this "particular mine." It finds the violation is not "per se" S&S, but then invents completely out of whole cloth a notion that an eleven percent (11%) overage is S&S. It does this even though, as we will see, safety authorities recommended that if MSHA adopted a requirement for only one refuge near the face, the distance should be 1,500 feet—that is, fifty percent (50%) beyond 1,000 feet. The majority does not provide any basis for 11%. How about 10.9%? Or 11.1%? Or 5%, 10%, or 15%, or the more than 50% an expert study recommended? *See infra* p. 14. Nonetheless, the majority explains the use of 11% as "simple" mathematics. Slip op. at 6 n.10. "Arbitrary" (random choice or personal whim) and "capricious" (given to unaccountable changes) seem far more descriptive.

[4] The fact that the inspector worked for many years running equipment such as a roof bolter or mining machine and then became a federal mine inspector speaks very well for him as an individual. Obviously, it does not qualify him as an expert regarding the placement of refuge chambers.

[5] While inspectors need not be experts to testify knowledgeably, this inspector's lack of expertise, experience, and training regarding the placement of refuge chambers necessarily detracts from the persuasive weight of his testimony.

("NIOSH") and expert studies permit and/or suggest placement of refuge chambers at distances further than 1,110 feet from the face. Other MSHA mandatory safety standards and state laws permit placement of refuges substantially beyond 1,110 feet, and respected government experts recommended placement of refuges at distances exceeding 1,110 feet.

For example, 30 C.F.R. § 57.11050(b) requires that refuge chambers in metal/non-metal mines must be within 30 minutes of the working place rather than within a prescribed distance requirement. Such a time requirement permits in underground metal and nonmetal mines placement of refuge chambers more than 1,110 feet from the face. Section 11.09 of Illinois' Coal Mining Act requires chambers within 3,000 feet of each working section of a mine—three times further than the federal regulation. 225 Ill. Comp. Stat. Ann. 705/11.09. The Illinois statute does not undercut the validity of the federal regulation, but it destroys an arbitrary notion that a distance of 110 feet (or 11%) over 1,000 feet is S&S without more facts.

Going further, in a report summarizing research required under section 13 of the Mine Improvement and New Emergency Response ("Miner") Act of 2006, Pub. L. No. 109-236, NIOSH stated,

> [T]he maximum distance from a working section to the refuge chamber or in-place shelter should be based on projected travel time rather than actual travel distance. Unless there is a compelling reason otherwise, the refuge alternative should be located within approximately 30–60 minutes from the face under the expected travel conditions, *assuming smoke-filled entries* and a directional lifeline.

Office of Mine Safety and Health, Dep't of Health and Human Servs., *Research Report on Refuge Alternatives for Underground Coal Mines* 8 (2007) (emphasis added) (footnote omitted); *see also* Nat'l Inst. for Occupational Safety and Health, Comment on Proposed Rule on Refuge Alternatives for Underground Coal Mines (Aug. 18, 2008).

In addition, NIOSH contracted with Foster-Miller, Inc. to perform a comprehensive study of refuge chambers in connection with NIOSH's comments on proposed section 75.1506(b). The contract included an exhaustive review of 42 mine disasters. The study concluded that either there should be two refuge chambers at nominal distances of 1,000 and 2,000 feet from the face (the chamber locations would range from placement at 500 and 1,500 feet to 1,500 and 2,500 feet), or, if only one chamber was required, it should be 1,500 feet from the face—that is, 390 feet farther than 1,110. Refuge Chamber Report vol. 1, 80, 153.[6]

[6] The majority asserts that MSHA changed the proposed rule to 1,000 feet "after extensive public input." Slip op. at 7. In fact, MSHA received 39 comments. Of those, only three commenters suggested a 1,000-foot minimum: the United Mine Workers of America ("UMWA"), the West Virginia Office of Miners' Health, Safety & Training ("WVOMHST"), and Senator Robert Byrd who simply submitted, but with his enormous political influence, the WVOMHST comment. The UMWA's most specific comment identified the Darby mine explosion as exemplifying the difficulty of moving through smoke and debris. As noted elsewhere, the Darby explosion was outby the face. At Darby, a refuge chamber at 2,000 feet

The majority incorrectly asserts that the foregoing discussion constitutes a "re-weighing of the rulemaking record." Slip op. at 7 n.12. Rather than reweighing the rulemaking record, the cited authoritative federal regulations, state laws, NIOSH comments, and expert reports, much of it from the rulemaking record itself, support my agreement with the majority that an excess distance of 110 feet is not a per se violation. Absent an understanding of the clear public record and scientific evidence upon which MSHA, state agencies, and expert authorities accept and/or recommend distances far in excess of 1,110 feet, one might be lulled into the inspector's per se analysis—namely, that 1,001 feet is S&S. The cited rules, statutes, and expert opinions demonstrate that, as the majority agrees, the distance of 1,110 feet is not automatically S&S and that such a finding requires evidence of the particular facts in the specific mine. Therefore, we now turn to the absence of any evidence about the conditions in this mine.

The ultimate question for review is whether a non-expert opinion given by one ordinary inspector who opined that one foot too far is S&S and who did not testify to any particular circumstances at the mine, standing alone, is sufficient to carry the Secretary's burden of proof. The majority concedes that the non-expert, predetermined opinion of the inspector is the sole reason for their affirmance of the S&S designation. Slip op. at 7-8. I find that opinion insufficient.[7]

The inspector provided no testimony relevant to the circumstances at this specific mine. Equally importantly, the inspector implicitly, but clearly, based the S&S finding upon his personal belief that any distance beyond 1,000 feet is an S&S violation. Stated simply, for the inspector, any distance beyond 1,000 feet was a per se S&S violation—a position that does not apply the correct standard and that the entire Commission rejects.

The inspector did not testify generally or specifically about operating conditions or operations in the mine before or at the time of his inspection. He did not testify about seam or ceiling heights; floor, rib, or roof conditions; ventilation; any mining being conducted during the relatively brief period of the violation; the straightness of exit routes; any operations outby the 1,000-foot mark; any beltlines, belt transfer points, power stations, etc., outby the face; or any other facts. He did not identify any locations other than the face at which an explosion, fire, or other emergency might occur or, given the composition of the mine, the conditions that would be

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would have been preferred. This does not undercut the validity of the final rule promulgated by the agency. However, it does show that the extra 110 feet at issue in this case cannot be presumptively a significant and substantial violation as in the specific explosion cited by the UMWA, 2,000 feet from the face would have been a preferable location.

[7] The majority states that I "rue"—that is, regret or am concerned about—"the lack of record evidence on points such as ceiling heights, the configuration of exit routes, and the presence of beltlines outby the face." Slip op. at 7. They are correct. I think the lack of any evidence about the particular facts of the mine to support an S&S citation is a problem, a very big problem. Indeed, the absence of evidence is an insurmountable problem.

reasonably likely to exist in the event of emergencies at varying locations.[8] In light of the absolute absence of testimony about the conditions of the mine, likely places for emergencies, or any other particular facts, it simply cannot be said the inspector's opinion demonstrated consideration of the circumstances. Without any evidence related to the conditions in the mine, the inspector's bare opinion underlain by a misunderstanding of the law does not carry the burden of proof.

Essentially, the inspector adopted a per se or presumptive S&S approach and, therefore, applied the wrong standard in issuing an S&S citation. There is no issue of credibility related to the inspector's testimony. Reading the transcript, no one can doubt that the inspector's honest and actual reason for citing the violation as S&S without any testimony regarding operating conditions in the mine was his personal belief that any distance beyond 1,000 feet is S&S. Consequently, the basis for the S&S citation is a personal belief of the inspector that any excess distance, of any dimension, is a per se S&S violation—a position the majority finds legally unacceptable.

As the majority points out, the Judge did seize upon one phrase—"at this mine"—in the inspector's testimony. Slip op. at 2. However, in that passage, it is clear that the reference to "at this mine" was based upon the release of methane in the mine.[9] Therefore, the reference to "at

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[8] In light of the inspector's reference to methane, it appears his concern for even an extra one foot of distance springs from a concern about miners located at the face if an explosion occurs. Of course, emergencies may arise from many locations other than the face. *See supra* note 2. Such tunnel vision betrays a lack of expertise. Non-experts may view face explosions as the only concern with respect to placement of refuge chambers, but face explosions are far from the only consideration in the location of refuge chambers. In refusing to recognize that fact, slip op. at 6 n.9, the majority chooses to ignore tragedies where miners retreated and a reachable refuge would have saved lives.

[9] The passage is:

> Q. Okay. So in this case or any other case, sir, you would consider it to be S and S, wouldn't you?
> A. If it exceeded 1,000 feet, probably.
> Q. Okay.
> A. At this mine. I mean, this mine has a history of methane. They have got a history of ignitions. They have had withdrawal orders issued, 107(a) issued for excess of methane. So this mine has a history.

Tr. 47. Separately, after stating his disagreement with the 1,000-foot standard, the inspector does say that "[e]verything was considered on this violation, not just the distance." Tr. 48. Immediately thereafter, however, he states such considerations were "not just this mine," thereby reinforcing his testimony that he considered any distance over 1,000 feet to be a generic S&S violation and "not just at this mine." *Id.*

this mine" is a reference to the mine's release of methane and not to the likelihood of reaching a refuge chamber.

Below, I discuss particular parts of the testimony in order to demonstrate the inspector's per se analysis. Reading the transcript, no one can misunderstand the inspector's frank testimony that it was his personal belief that this was a per se violation—that is, any distance beyond 1,000 feet is S&S. The inspector testified that he disagreed with the substance of the regulation, opining that the regulatory standard of 1,000 feet is too far from the face:

> Q. Okay. You think 1,000 feet is too far, correct?
> A. I do, yes.

Tr. 47.

The inspector testified that he would have cited the violation as S&S if the refuge chamber were 1 foot beyond 1,000 feet:

> Q. You would have considered this S and S if it had been 20 feet too far, wouldn't you?
> A. Yes.
> Q. Or ten feet?
> A. Yes.
> Q. Or one foot?
> A. Yes.

Tr. 46-47.

Nowhere does the inspector base his opinion upon the particular conditions in this specific mine should an emergency occur. As noted above, and not disputed by my colleagues, the inspector did not provide any evidence about specific conditions in this mine or any conditions causing one foot to be "too far." In the absence of any testimony about the conditions actually present in the mine, a stray comment about the citation being "at this mine" does not provide any factual support for the S&S designation. Indeed, the inspector demonstrates that he did not believe it necessary to take the particular facts at the mine into account in issuing the citation as S&S. He testified:

> Q. Okay. And that has nothing to do with the actual conditions in this mine, it is just your opinion that a violation of this standard is significant and substantial, correct?
> A. In this case.
> Q. Okay. You think 1,000 feet is too far, correct?
> A. I do, yes.
> Q. Okay. So in this case *or any other case*, sir, you would consider it to be S and S, wouldn't you?
> A. If it exceeded 1,000 feet, probably.

Tr. 47 (emphasis added).

The "probably" is without any explanation and is at odds with his testimony that 1 foot over the 1,000 feet is S&S and that the baseline standard of 1,000 feet is too far. This honest inspector testified that he marked the citation S&S because the refuge chamber was more than 1,000 feet from the face without any evidence that he considered any particular factor at the mine at the time of violation.

Here, other than stating his personal, non-expert view that 1,000 feet is "too far" so any foot beyond 1,000 feet is S&S, the inspector did not support the citation with any testimony about the specific conditions at this mine. The inspector frankly testified that the only fact he considered at this mine was that the mine was on a 10-day spot inspection for methane, Tr. 47, which the majority correctly notes is irrelevant to the S&S analysis for this violation. Slip op. at 4.[10]

Based upon the inspector's failure to discuss specific conditions at this mine, his failure to differentiate between this mine and any other mine, and his stated disagreement with the standard as promulgated, the inspector's testimony does not constitute substantial evidence to support a reasonable likelihood that a miner could not reach the refuge. Because the inspector's lay testimony is the only evidence submitted by the Secretary, substantial evidence does not support the Judge's finding.[11]

CONCLUSION

The Commission must base its decisions upon the objective application of the proper legal standard to the case before us rather than applying our own non-expert preferences and/or fears or the predetermined judgment of one non-expert inspector. If the Secretary had provided evidence of conditions in the cited mine sufficient to support a reasonable likelihood that miners

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[10] Near the end of their opinion, the majority emphasizes, "[w]e reiterate that whether a particular violation is S&S must be determined on a case-by-case basis, considering the particular facts and circumstances established in the record." Slip op. at 8 n.16. I agree. Particular facts must be taken into account. Here, the only fact in the record is a non-per se distance of 110 feet, but the majority upholds a finding that the violation is S&S. The majority's opinion is cognitively dissonant—they juxtapose a repeated emphasis on a need for particular facts with a finding made without particular facts.

[11] The majority attempts to distinguish this case from *Rushton Mining Co.*, 11 FMSHRC 1432 (Aug. 1989), by asserting that "[h]ere, there is no counter-evidence that the violation was, in fact, non-hazardous." Slip op. at 8. In *Rushton Mining*, the Commission concluded, "the Secretary has failed to show that the distance, travel time, or any inherent qualities of the cited route posed a discrete safety hazard." 11 FMSHRC at 1436. It is not the operator's duty to rebut the Secretary case when the Secretary's case fails in the first instance. The majority must not actually intend to relieve the Secretary of the burden of proving violations are S&S. Even hinting at such a notion, however, imperils a most basic principle upon which due process depends.

at this mine would not have been able to reach the refuge chamber in an emergency during the period of the violation, I would readily concur with my colleagues.[12]

Here, however, the entire "proof" offered by the Secretary is the opinion of one witness who (1) was not offered as an expert on emergencies, (2) did not testify about any of the conditions or operations in the mine that might come into play during an emergency or where emergencies might occur other than the face, (3) disagreed with and disavowed the mandatory standard, and (4) opined he would find a one-foot violation to be S&S. The unsupported, non-specific, predetermined testimony of one non-expert does not carry the Secretary's burden of proof.

I respectfully dissent.[13]

William I. Althen, Commissioner

[12] I do not find any magic line above 1,000 feet at which the distance either is or is not S&S. I would support a finding that a violation of section 75.1506(b) by any distance is S&S if substantial evidence supported such a finding.

[13] As a final point, I disagree with my colleagues' assertion that judges may not consider safety measures specifically designed to prevent the occurrence of a hazard in evaluating the likelihood of the occurrence of that hazard. *See* slip op. at 9. At step two, the issue is the likelihood of the occurrence of the hazard based upon the particular facts surrounding the violation. At step two, preventative measures may make the occurrence of a hazard less than reasonably likely. Preventative measures may not be dispositive, but we should consider all factors that affect the likelihood of the occurrence of the hazard. Cases cited by the majority relate to step three of the *Newtown* analysis, at which point the Secretary has established the reasonable likelihood of the occurrence of the hazard. The existence of extraneous factors that militate against the occurrence of the hazard at which the standard is directed, for example, water drenched coal accumulations or technical innovations designed to prevent a hazard, are relevant to the likelihood that the hazard will occur.

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